

Chirp Virtual MIDI Keyboard Controller User Guide (Build 2.0)

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Getting Help

We encourage you to EMAIL us with any question you might have related to using Chirp (or any Tanager AudioWorks product for that matter.) EMAIL us at support@tanageraudioworks.com, we will reply in a timely manner.

We keep an up-to-date Troubleshooting Guide on our website reflecting important fixes to known issues. Access the website at:

<http://www.tanageraudioworks.com>

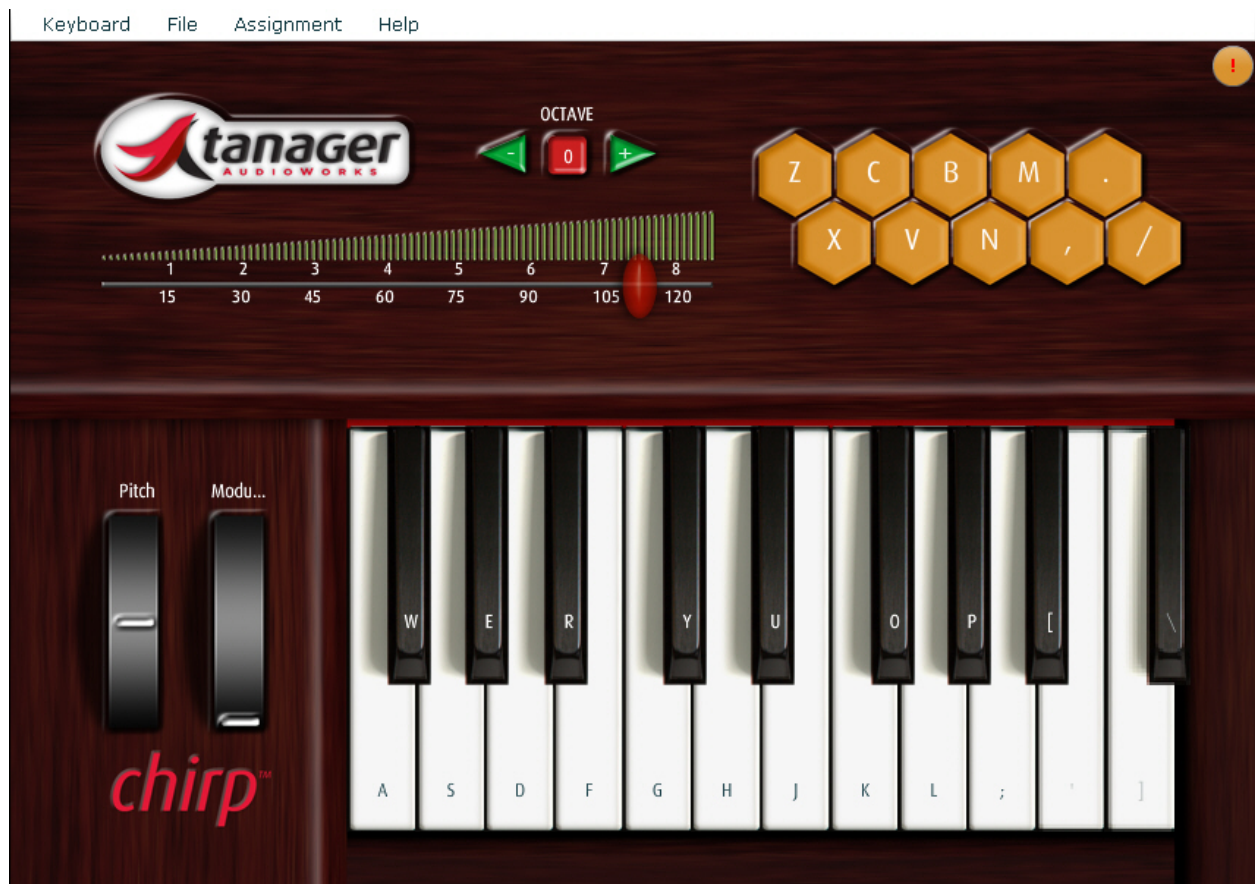
What is Chirp?

Chirp turns your computer or laptop keyboard into a virtual MIDI keyboard controller with 18 piano keys, 10 drum triggers and all the control you'd expect from a piece of hardware.

The program produces no actual "sound" itself - instead it produces MIDI notes and messages, which in turn "drive" any music software application, MIDI instrument or plug-in soft synthesizer capable of generating sound from MIDI input. Many music software applications and soft synths include some virtual keyboard capability, but very few allow the MIDI notes to be generated using your computer keyboard. Many limit input to a mouse click, which makes chord entry and real-time playing virtually impossible. Chirp accommodates up to 7 notes on the keyboard to be played simultaneously and in real-time, allowing for even complex 9/11/13 chord entry over 2 octaves.

Chirp was designed to be a low latency controller capable of both supply MIDI notes and displaying played notes from any music application with MIDI I/O capabilities. We envisioned the primary computer platform as a Windows or Mac laptop, and most likely in a remote environment where the use of a physical keyboard is impractical, such as an airplane seat, bus seat (or even your desk at work!) Chirp allows the user to choose which computer keys are mapped to the piano keyboard keys, as well as assign the trigger pads to any MIDI event.

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Features and Specifications

Chirp Features

Ports

- 16 Channel Virtual MIDI Input/Output Port
- Piano Keyboard and Trigger Pads assignable to different MIDI Channels

Keyboard

- High resolution photo-realistic display - large and small display sizes available
- 18 to 21 notes mapped to computer keyboard keys for generating MIDI data with assignable velocities
- 18 to 21 on-screen keys to display incoming MIDI note data
- Note velocity controlled by graphical slide or preset values assigned to top row number keys
- Graphical octave control allows access to all 127 defined MIDI notes

Controls

- 2 programmable continuous controller wheels operated with the mouse or glide pad - assignable to any continuous controller
- Space Bar assignable as on/off pedal (damper/sustain, etc)
- 10 trigger pads assignable to any MIDI event (on a different channel than the keyboard keys)
- "All Notes Off" Panic button
- Ability to send note data even when Chirp is not the focused application

MIDI Data Capable From Continuous Controller Wheels

- Control every MIDI continuous controller defined in the latest MIDI Specification
- Pitch bend and Mod wheel set up as default controllers; user can define any combination

MIDI Data From Trigger Pads

- Note On/Off with assignable velocity
- Program Change messages
- Specific Controller Values
- SYSEX Messages
- Default mapping to GM Drums on MIDI Channel 10 for most commonly used drum sounds

Minimum Computer Requirements

Chirp utilizes the Adobe AIR Framework as an integral part of the architecture. Similar to JAVA, it provides support for both PC and Mac platforms. In addition, it provides the rich user interface experience of Adobe Flash combined with the potential for stand-alone web/desktop applications. AIR really drives the minimum requirements for Chirp.

Windows

- 2.33GHz or faster x86-compatible processor or Intel® Atom™ 1.6GHz or faster processor for netbooks
- Microsoft® Windows® XP Home, Professional, or Tablet PC Edition with Service Pack 3; Windows Server® 2003; Windows Server® 2008; Windows Vista (including 64-bit editions) with Service Pack 2; or Windows 7 or later
- 512MB of RAM (1GB recommended)
- LoopBe30 MIDI Loopback Driver (included)
- Audio input/output device (Chirp works with an internal sound card or external audio interface.)

Mac OS X

- Intel Core Duo 1.33GHz or faster processor
 - Intel Core™ Duo or faster processor
 - Mac OS X v10.6 or later
 - 512MB of RAM (1GB recommended)
- Audio input/output device (Chirp works with an internal sound card or external audio interface.)
- MIDI Sound Source or built in Quicktime MIDI Synthesizer
- Any Digital Audio Workstation, synthesizer or sampler software capable of producing sound from incoming MIDI data

Chirp Windows Installation

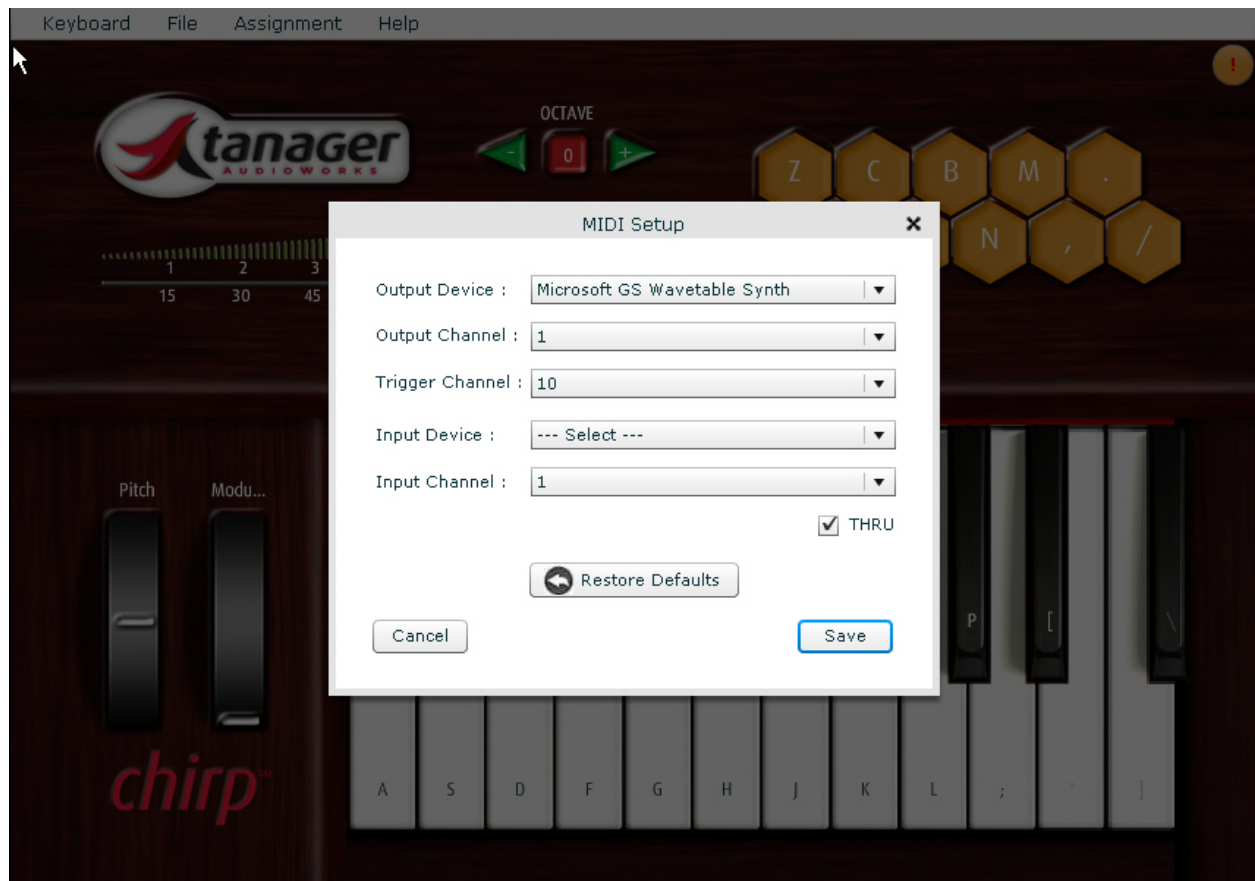
Installing Chirp on Windows

When you install Chirp, you'll need to have an internet connection. The latest instructions for Windows installation can be found in the Chirp Installation Procedures document on our website at www.tanageraudioworks.com under the Documentation tab.

Configuring Chirp in Windows XP

Choose **Start, Control Panel**, then select **Sounds and Audio Devices**. On the **Audio** tab, go to the **MIDI music playback** section and select **Microsoft GS Wavetable Synth** from the drop down box. Click on the **Volume** button below this dialog box and make sure the volume for the **SW Synth** is turned up. Close that dialog, select **OK** and close the Control Panel. Load Chirp. Click on the **File** menu, then choose **MIDI Setup**.

In the **Output Device** drop-down menu, choose **Microsoft GS Wavetable Synth**. Set the **Output Channel** to Channel 1 and click Save.



Play the Chirp keyboard with either the computer keyboard keys or the mouse - you should hear a piano sound coming from your computer speakers.

If you do not see the Microsoft GS Wavetable Synth - please refer to the document on our website found at:

http://www.tanageraudioworks.com/Datasheets/Microsoft_GS_Wavetable_Synth_Issues.pdf

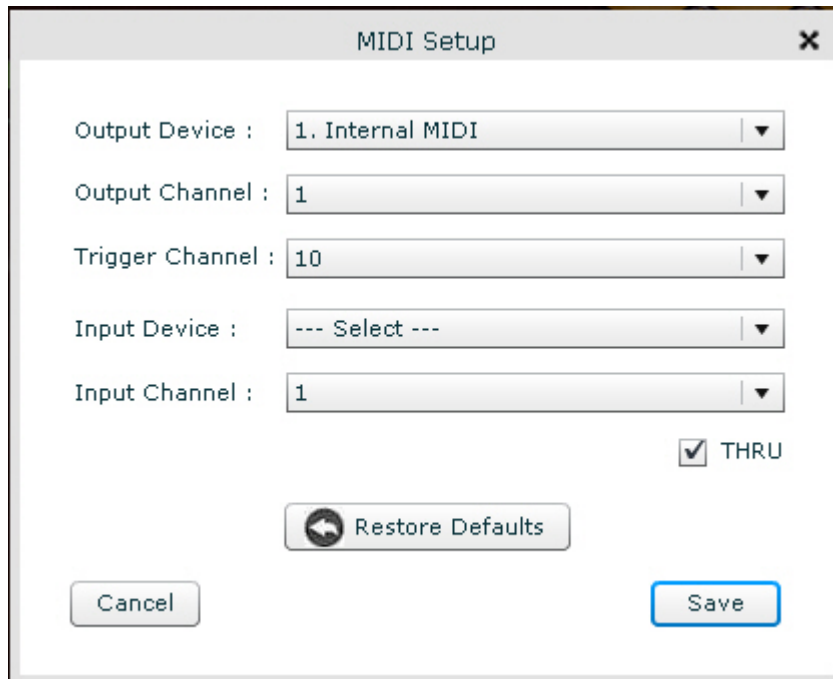
Configuring Chirp in Windows Vista/7

Click on the **File** menu, then choose **MIDI Setup**. In the **Output Device** drop-down menu, choose **Microsoft GS Wavetable Synth**. Set the **Output Channel** to Channel 1 and click Save. (VISTA behaves differently than XP for MIDI. The dialog box that allows a default MIDI synth sound is gone. Right click on the speaker icon in the tray or choose **Start, Control Panel**, then select **Sound**. MIDI settings in Vista will be found under the **Recording** tab in case you need to make changes.)

Play the Chirp keyboard with either the computer keyboard keys or the mouse - you should hear a piano sound coming from your computer speakers.

MIDI Port and Channel Setup

Load Chirp and select the **File** menu and choose **MIDI Setup** at the bottom of the drop down list.



Any MIDI device installed on your computer should show up in these menus. Use the **Output Device** drop-down menu to select the MIDI port that Chirp should send its MIDI keyboard data to, and use the **Output Channel** menu to select the MIDI channel Chirp will transmit on. If you just plan on using Chirp to make sounds without a host music application - keep the Output Device set to your internal synth sound. To use Chirp to send MIDI data to a host digital audio workstation application set the Output Device to **1. Internal MIDI** (or any of the many available ports that are listed there.) You can designate a specific channel for Chirp to transmit its data on, or leave the **Output Channel** un-selected. In your DAW application, choose **1. Internal MIDI** as the Input Device. Most DAWs will allow you to select "**MIDI Omni**" or "**All**" to listen for data on any channel - you can choose this or select a specific channel matching your setting in Chirp's **Output Channel** setting.

Input Device and **Input Channel** should be set up if you wish to see MIDI note data from another MIDI application or port to be displayed on the Chirp keyboard display. In your host application, set the output port to Chirp MIDI Out and choose a channel. For more DAW or synth-specific set up and usage information, see the **Using Chirp With Popular Music Software** section.

Chirp Mac Installation

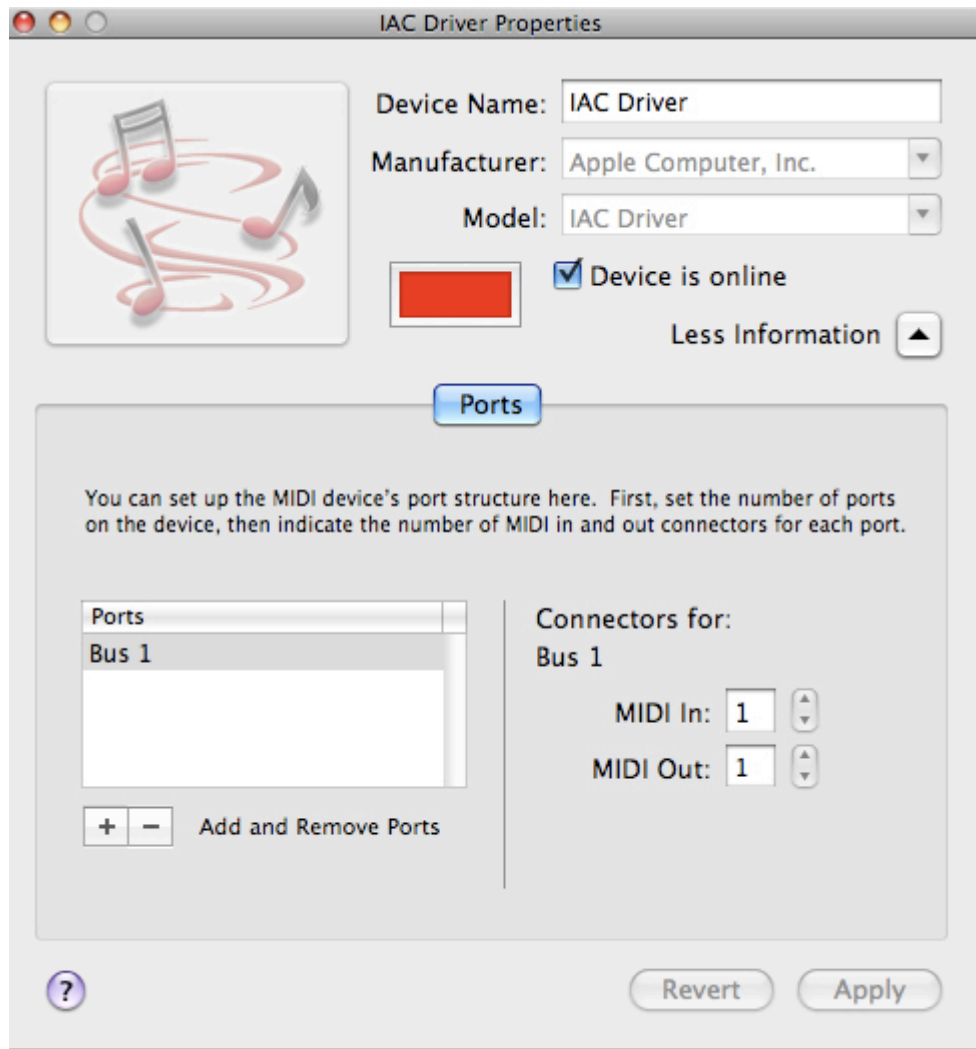
Installing Chirp on Mac

When you install Chirp, you'll need to have an internet connection. The latest instructions for Mac installation can be found in the Chirp Installation Procedures document on our website at www.tanageraudioworks.com under the Documentation tab.

Configuring Chirp on the Mac

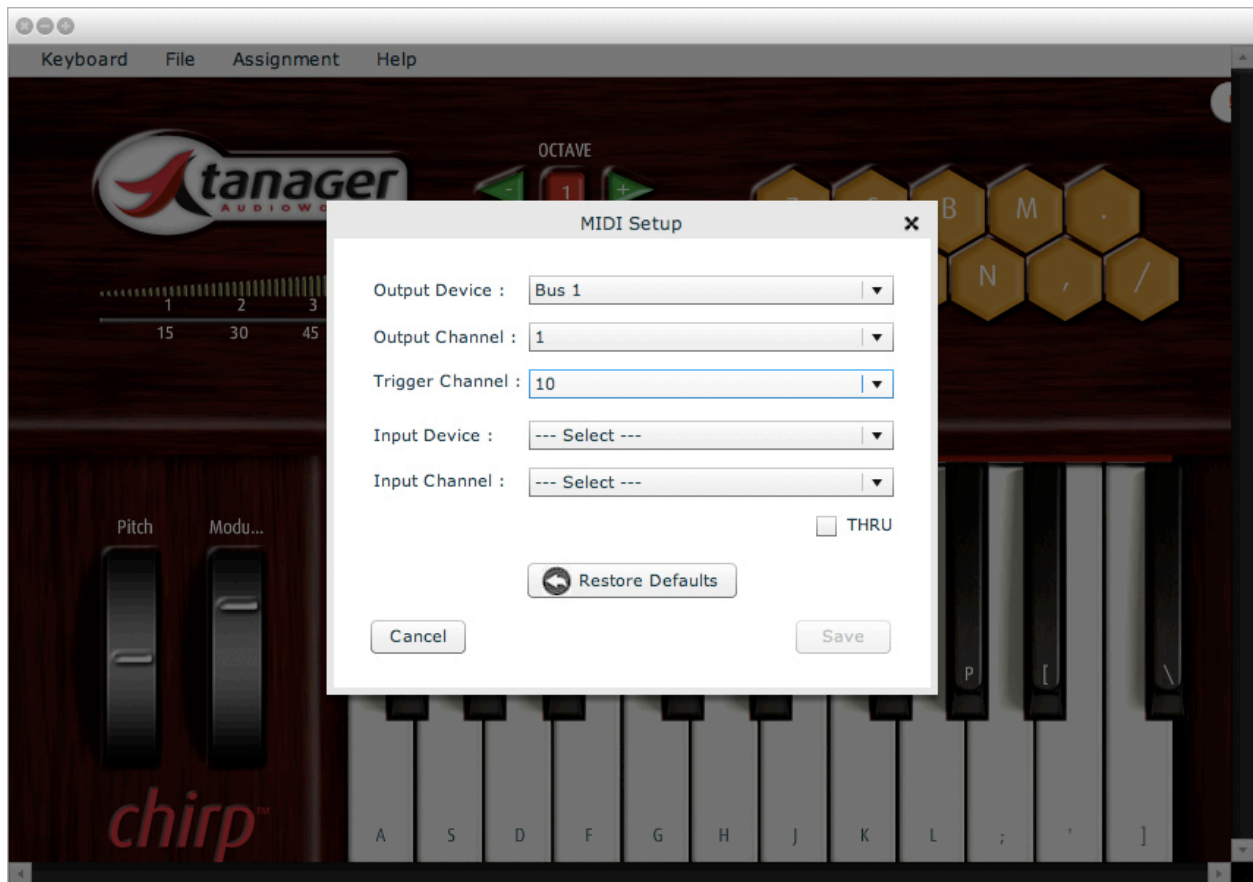
Chirp Mac should work from the Mac keyboard once its loaded. The Mac automatically connects Chirp to the built-in Quicktime MIDI Synth. Press the keyboard keys and you'll hear a piano sound - press the drum trigger pad keys (z,x,c,v, etc) and you'll hear drums. Simple as that.

To route the MIDI data to your favorite DAW or sequencer program, Chirp utilizes the Mac's **IAC Driver** found under the **Audio-MIDI Setup** Utility. Be sure to open this utility, double click the **IAC Driver** icon and check the box saying **Device is Online**. Chirp will show up as "Bus 1" in your music software applications.



One more thing – under **Universal Access** in the **System Preferences** menu on your Mac, be sure to check the box at the bottom of the dialog that says **Enable access for assistive devices**. This option is required in order for the **Send Notes Always** capability in Chirp to operate properly.

In Chirp, select the **File** menu and choose **MIDI Setup** at the bottom of the list. Make sure to set the Output Device to match the IAC Driver's Port (**Bus 1** in this case.) Set the output channel to Channel 1 (or whatever channel you would like the Chirp keyboard to transmit on.) Set the Trigger channel as well - the default is channel 10 (which is the channel most drum synths listen on.)



A bit about computer keyboards. Unless you have a fancy gaming keyboard where every key is wired independently, most computer keyboards are wired in a row/column switch matrix - there are certain key combinations that may not work together (hence some chords you won't be able to play.) This is completely dependent on the keyboard manufacturer and beyond the scope of what we can help with. Also, as you launch Chirp, every now and then Adobe AIR will check to see if there is a newer version when you launch Chirp - and if it finds one it installs it (similar to the Adobe Flash player.) This is quick and painless.

Using Chirp

Basic Usage

Using Chirp

Once configured properly, Chirp is simple to use. The various keys and controls are mapped by default to the following computer keyboard keys (irrelevant of case):

Key #	Note	Computer Keyboard Mapped Key
1	F	A
2	F#/Gb	W
3	G	S
4	G#/Ab	E
5	A	D
6	A#/Bb	R
7	B	F
8	C	G
9	C#/Db	Y
10	D	H
11	D#/Eb	U
12	E	J
13	F	K
14	F#/Gb	O
15	G	L
16	G#/Ab	P
17	A	;
18	A#/Bb	[
19	B	.
20	C	]
21	C#/Db	\

Keys 19,20 and 21 are considered "extended" since they are not physically aligned to the piano keyboard as the other key mappings are. They can be enabled in the **Keyboard -> Preferences** menu. (Entering more complex chords in the key of C may require these to be on.)

The **Keyboard** Menu also allows the user to remove the computer key labels from the Chirp graphical interface. This may be desirable if the MIDI In mode is being used to

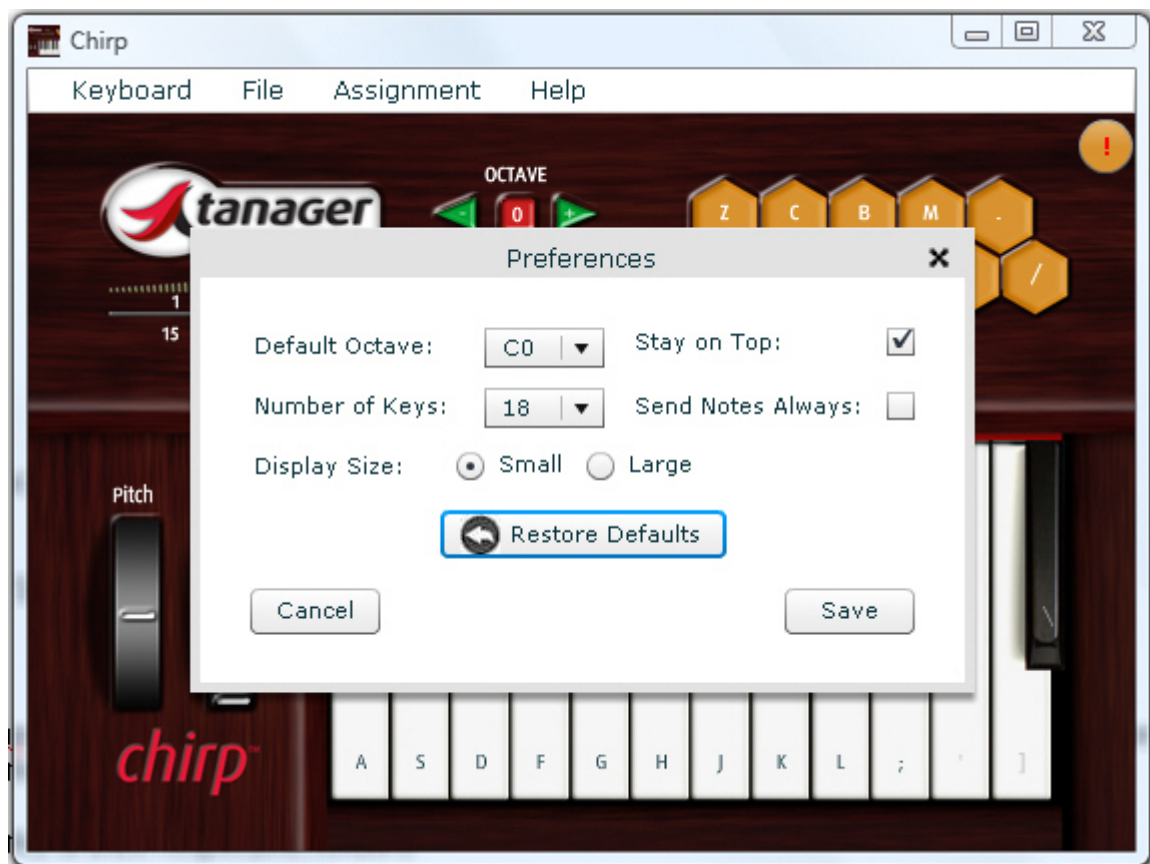
watch a piano being played by externally supplied MIDI data (where the computer key maps are irrelevant.) Choose **Hide Labels** to remove the labels.

To quit Chirp, simply click on the "X" in the upper right in Windows or the upper left on the Mac. You can also choose **Quit** in the **Keyboard** menu.

Tooltips

Chirp lets the user know what specific MIDI notes or controller values are mapped to the keyboard at any time. Hover your mouse over any control or key and wait a moment - Chirp will display that note number, note value or controller value as a Tooltip. This is an ideal way to determine exactly which MIDI note numbers are being sent to an external synth or sound module.

Setting Up Chirp Preferences



Chirp allows the user to specify the default octave, number of active keys (18,19,20 or 21) and the default display size of the application. Return to the Factory Settings at any time by hitting Restore Defaults. The default octave is mapped so the 1st C note (mapped to the computer's G key by default) is Middle C (MIDI Note 60.)

The **Stay on Top** checkbox forced Chirp to always be displayed even when it is not the focused application. The "**Send Notes Always**" checkbox will allow the Chirp keyboard keys to work even when Chirp is not the focused application. Be certain that your focused application (your sequencer, DAW or whatever) doesn't also use those keyboard keys as shortcuts. If they do, try re-mapping the Chirp keys in the Assignment -> Key dialog box.

One more thing - the **CAPS LOCK** key toggle's Chirp's output and functionality on and off. This can be extremely helpful if you are using the **Send Notes Always** function and your focus is on your DAW or sequencer - just use **CAPS LOCK** if you want to disable Chirp's use of the mapped keys.

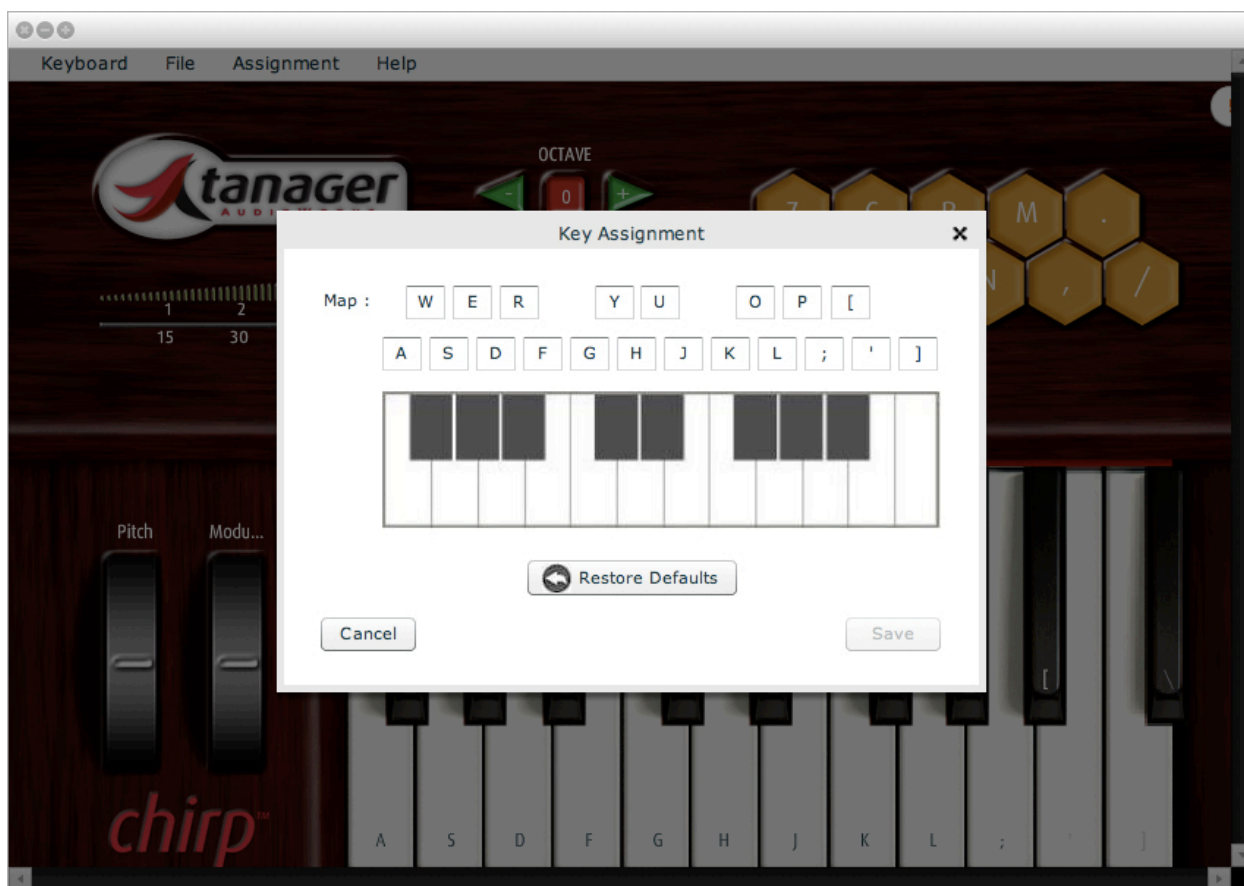
Changing Piano Key Mappings

If you are unhappy with the default computer keyboard mappings, Chirp allows you to define your own and save your settings away. Your definitions need to conform to a rules:

- Key mappings must be a single key - no key combinations are allowed (i.e Ctrl+M.)
- Keys are mapped next to each other, and valid key sets are:
 - F1 through F12
 - `,1,2,3,4,5,6,7,8,9,0,-,=
 - Q,w,e,r,t,y,u,i,o,p,[,],\
 - A,s,d,f,g,h,j,k,l,;,'
 - Z,x,c,v,b,n,m,,.,,/

Select **Assignments** and choose **Key** to change key mappings.

You may want to use this if your DAW, sequencer or soft synth application makes use of the same keys for keyboard shortcuts or hot keys. Also - since it is easier to play notes on the same row on any laptop keyboard, consider mapping the notes of the scale your melody is in to these "ASDF..." keys - it may make it easier to develop a melody line.



You can always return to the Factory Settings by choosing restore Defaults - this is the case with all assignable parameters in Chirp. Chirp will force you to enter mappings per the list above - click on the 1st box (with "A" in it) and enter the letter "Q" - the rest of the keys will automatically fill in with the valid key set.

Velocity Ranges

The Velocity slider controls the velocity of a MIDI note - this represents how hard or fast the note was played on a real piano keyboard. Higher values sound like they were struck harder, and lower values represent gently pushing the key down. Since the PC keyboard is not capable of representing real key velocity and pressure like a MIDI keyboard controller can, we have to "tell" the host application how hard the notes should have been struck. You can grab the slider with your mouse and set the velocity where you'd like it - or just hit a number key on your computer and the velocity will jump to a preset. These presets are user definable - look in the **Assignment** menu and select **Velocity** to make these whatever you want.

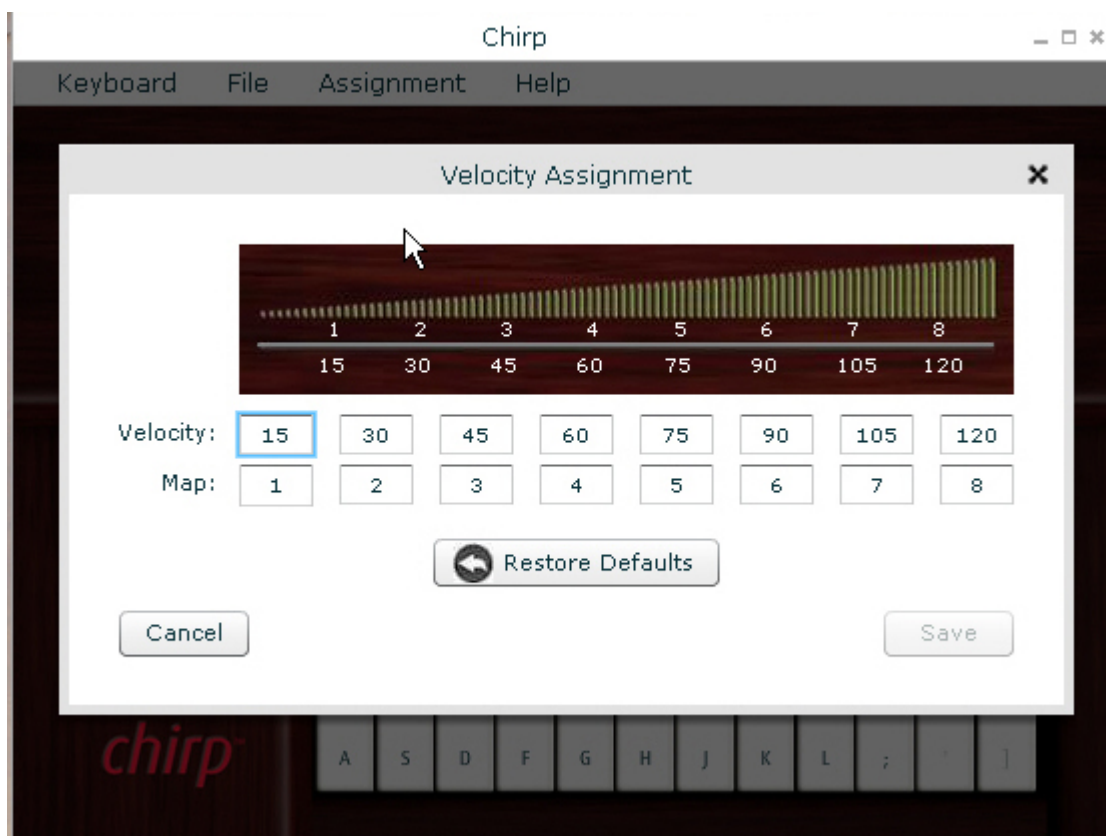
Velocity Range	Default Key	Terminology and Loudness
1 - 15	1	Extremely soft
16 - 30	2	Pianissimo (Very Soft)

31 - 45	3	Piano (Soft)
46 - 60	4	Mezzo Piano (Moderately soft)
61 - 75	5	Mezzo Forte (Moderate)
76 - 90	6	Forte (Loud)
91 - 105	7	Fortissimo (Very Loud)
102 - 127	8	Extremely Loud

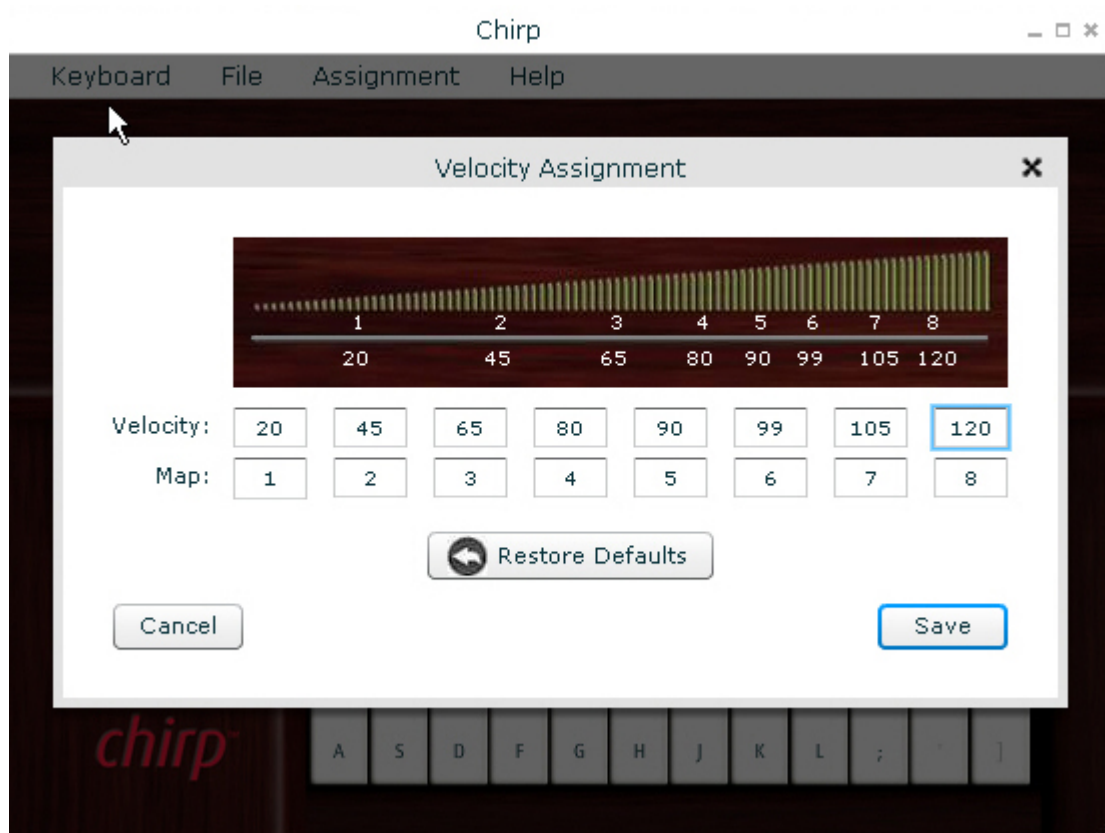
Keep in mind that some MIDI modules and synthesizers produce different timbres when notes vary in velocity - make sure to play with striking a note at a variety of velocity values on the synth you are using to see if this is the case.

Changing the Default Velocity Key Assignments

Chirp ships with the computer's top row number keys pre-assigned to specific velocity settings. To create your own velocity mappings, simply select the **Assignments** menu and choose **Velocity** from the drop down list. The **Velocity Assignment** dialog will open up. Enter any velocity level you wish for each number key. *Note - if you wish to use other keys instead of the number keys, enter that key in the **Map** field. Chirp allows any unmapped key to be used. Previously mapped keys cannot be used.*

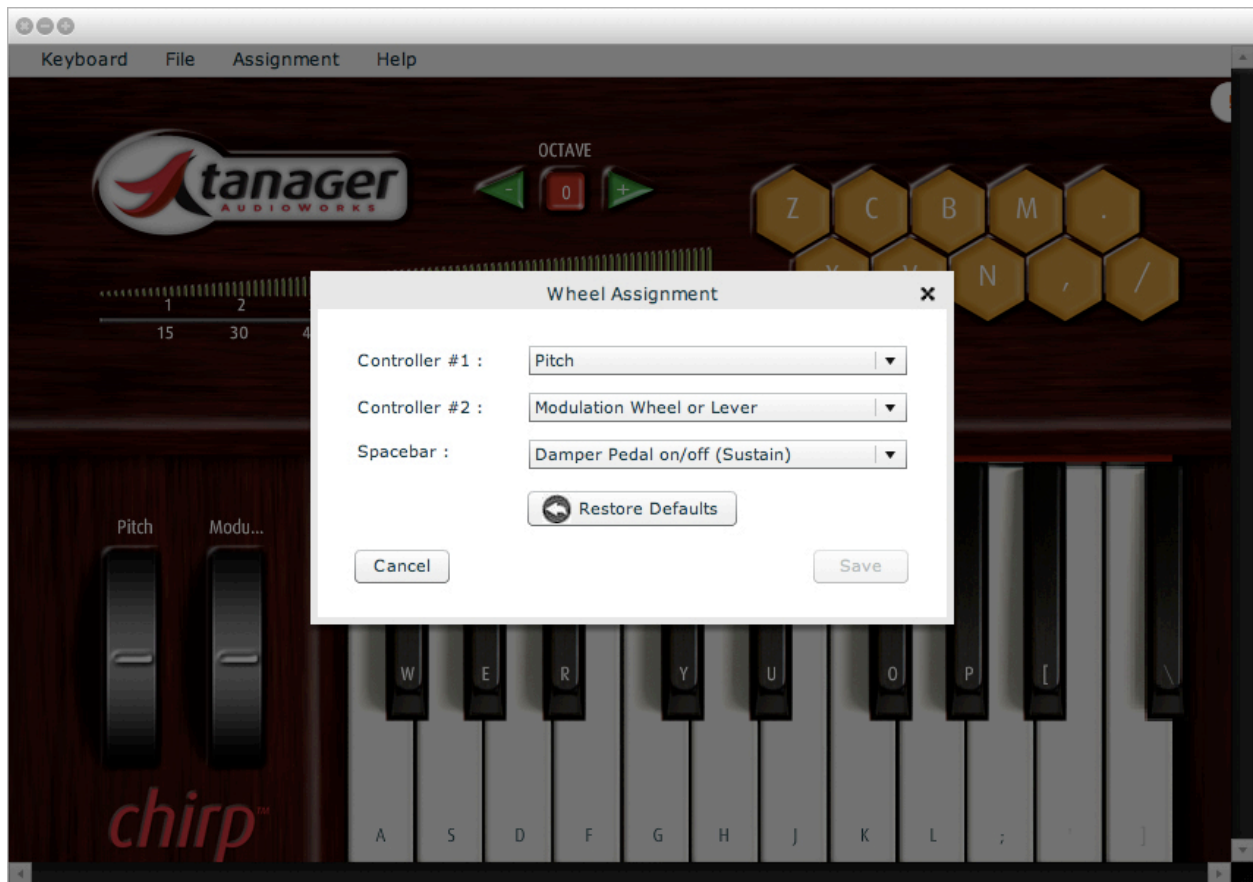


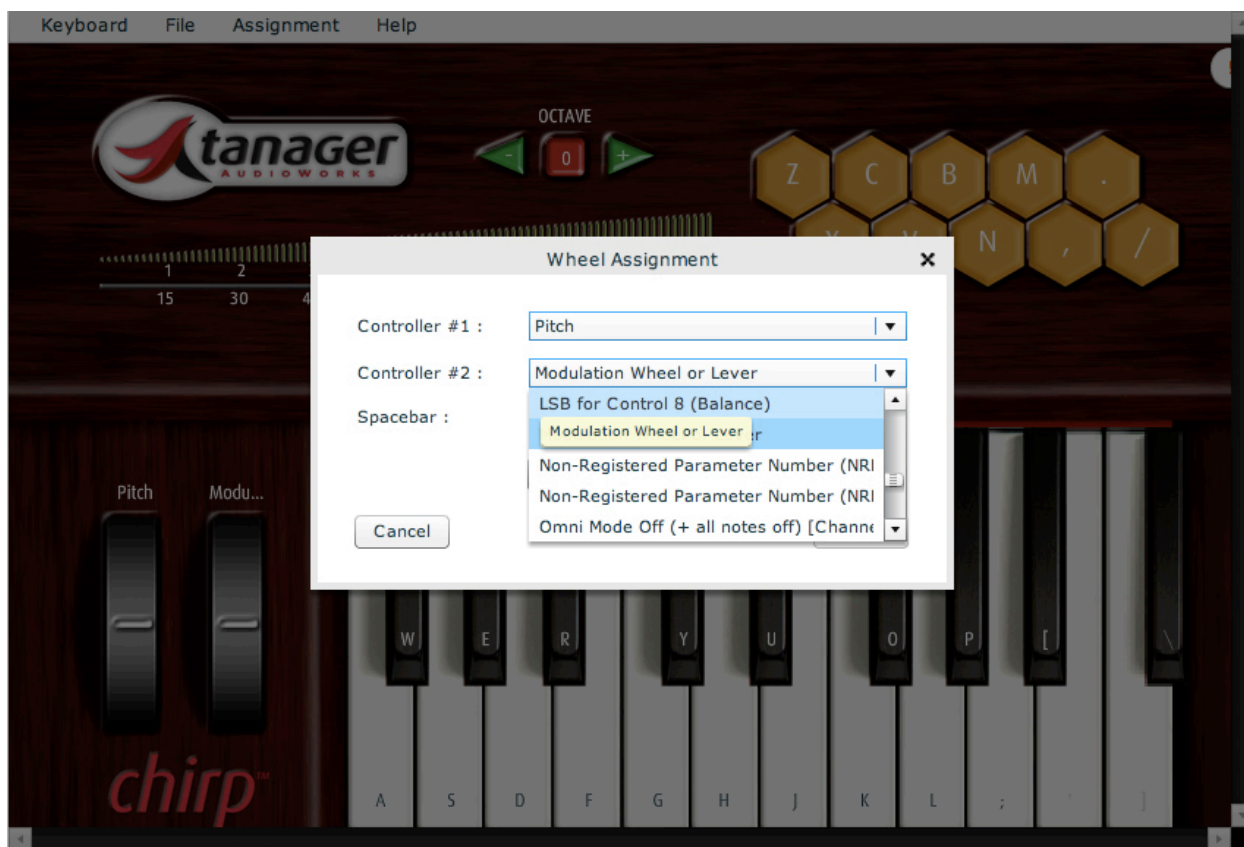
The scale will automatically change to show the new key mappings as shown below.
Note - Chirp will only allow velocity values in ascending order to be entered in these fields.



Controller Wheel and Space Bar Assignments

Choose the Assignment menu and select Wheel.





Any controller defined in the MIDI specification can be assigned to either of the two wheels. If the controller has a "return to center" hardware behavior such as Pitch bend, the wheel will emulate this behavior. For other controller values, the wheel stays where it is set. Both wheels are moved using a mouse or glide pad - grab the white line on the controller wheel with the mouse button down and move the wheel - the controller values are sent continuously. The same choices are provided in the drop down menu for Controller #1 and #2 - scroll through. (Chirp has the full name of the controller from the MIDI specification in the menu - hover over the choice and a Tooltip will appear with the non-truncated full controller name.)

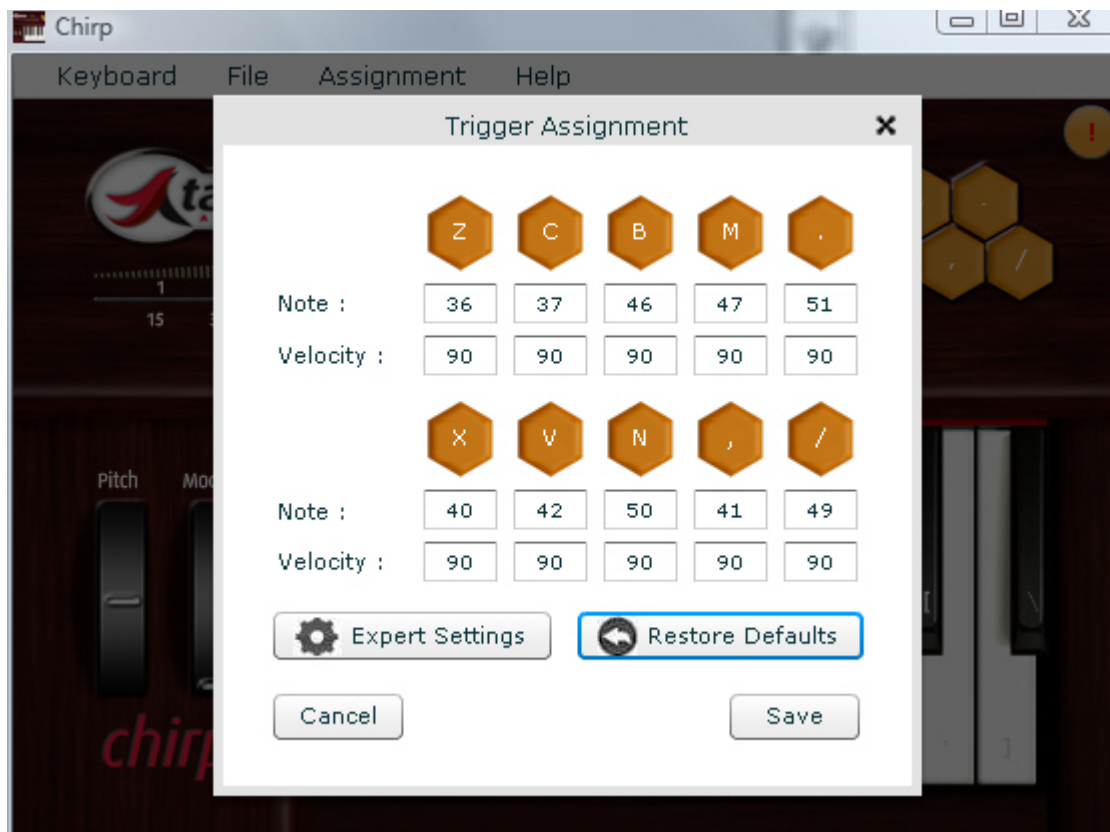
Note - remember that not all samplers allow pitch bends or other controller actions on the note data - this all depends on the hardware or software synth patch sounds.

The spacebar can be assigned to any "on/off" controller such as sustain, foot pedal, portamento, etc. Simply look through the choices in the drop-down menu and select.

Trigger Pad Setup

Chirp offers 10 programmable trigger pads mapped to computer keyboard keys. These can be used to send not only MIDI Note data on a different channel than the piano key

mappings (ideal from drum triggers) but any specific MIDI event. These include Note data, Program Changes, specific Continuous Controller values, or even manufacturer-specific System Exclusive (SYSEX) MIDI data.



There are two setup views - Simple Settings and Expert Settings. Simple Settings allows the user to map computer keyboard keys to specific Note data. For each trigger pad, there are two data fields the user can manipulate - Note and Velocity. Refer to your MIDI Hardware or Soft Synthesizer manual for more details on what values to use.

If you are mapping to drum sounds, we included a [table](#) which may help you determine what sounds map to which MIDI Note values. The default trigger mappings are all set to a Velocity of 90 and the following drum sounds:

Key	Drum Sound
Z	Kick
X	Snare
C	Side Stick
V	Closed Hi-Hat
B	Open Hi-Hat
N	High Tom
M	Mid Tom

Comma	Floor Tom
Period	Ride Cymbal
/	Crash Cymbal

As long as you are transmitting the Triggers on the appropriate MIDI Channel for your Drum Synth or external module (usually Channel 10) you should be able to get up and running quickly with these key mappings.

Saving or Recalling Your Setups

Chirp has the capability to save the complete setup of the controller in a file - including the key mappings, trigger pad mappings, controller wheel mappings and the MIDI port setup. This is extremely convenient since the setup of Chirp will change often depending on the host sequencing or synthesizer software (or hardware) used.

To save your setup, select the **File** Menu and select **Save**. Use the **Open** selection to set up Chirp from a previously saved file. Each setup or assignment menu offers a **Restore Defaults** choice which brings Chirp back to the factory default setup.



All Notes Off Button



Occasionally MIDI notes get "stuck" through a variety of circumstances. The Chirp display will show one or more keys in a depressed state when this occurs. To reset all notes, hit the **panic button** (exclamation point) icon in the upper right of the Chirp display. All notes will return to the OFF state.

CAPS LOCK Toggle

The **CAPS LOCK** key is like an On/Off switch for Chirp. It does not shut the application down, but it stops any data from being output when the mapped keys are pressed. This is normally used when the user has selected "**Send Notes Always**" so the focus can be on the recording or sequencing application. When **CAPS LOCK** is turned on, Chirp stops sending data.

Keyboard Shortcuts

Chirp has several useful keyboard shortcuts programmed in. These are:

Shortcut	Command
CTRL N	New
CTRL O	Open
CTRL W	Close
CTRL S	Save
CTRL Q	Quit
CTRL L	Toggle Labels On/Off
CTRL M	MIDI Setup
CTRL-SHIFT K	Key Assignment
CTRL-SHIFT T	Triggers Assignment
CTRL-SHIFT V	Velocity Assignment
CTRL-SHIFT W	Wheel Assignment
CTRL H	Help

(On the Mac, use the Apple/Command key in place of CTRL.)

Help Menu

The Help Menu allows the Help system to be loaded by selecting **Chirp Help**.

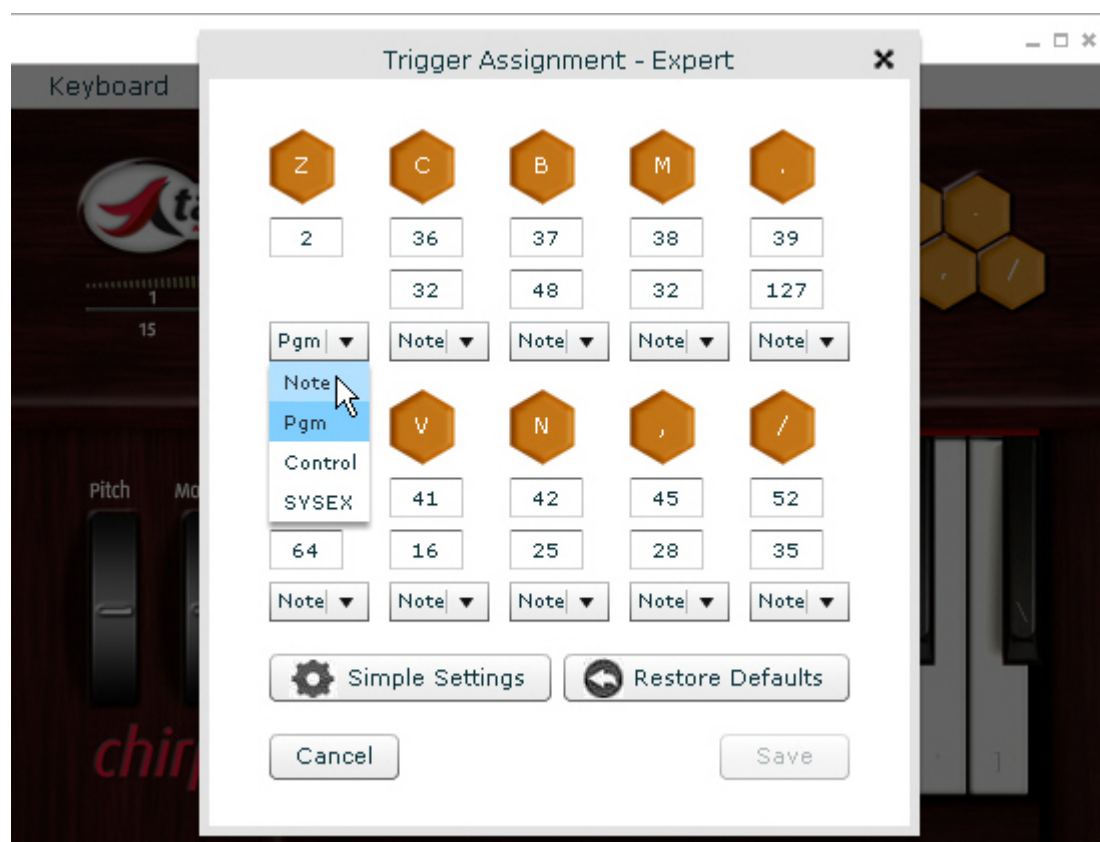
The **Community** selection takes you to the Tanager AudioWorks Community page on the web.

The **Support** selection takes you to the Support page on the Tanager AudioWorks website where Technical Support information can be found.

Advanced Usage

Trigger Pad Expert Settings

Expert Settings



The **Expert Settings** button take you to the **Expert Settings** window. This dialog allows you to send Note, Program Change, Continuous Controller or SYSEX data out for any mapped key is pressed. Chirp allows you to mix and match - each key is

completely assignable independent from the others. Depending on which MIDI data type is selected, there will be one or two data fields available. (MIDI Note data is set up as described above in the **Simple Settings** discussion.)

We'll cover how to send Program Changes, Controller Values and SYSEX commands next.

Sending Program Changes

Sending Program Changes from Chirp

First - be sure to set your **Trigger Pad Channel** to the desired MIDI Channel using the **File ->MIDI Setup** menu. Select the **Pgm** choice in the pull down menu. One data field appears for assignment to a specific Program Change Message. Your synthesizer or external sound module manual should contain a table of Program Change numbers and specific sounds or patches for these choices. Consult this table for General MIDI program change definitions if the synth you are using is mapped to GM standards (such as the "Microsoft GS Wavetable SW Synth" supplied with most Windows computers.)

Program Change Overview

Program Change and Bank Change messages allows a user to change the sound or "patch" of a synthesizer or sound module. The General MIDI (or GM) specification defined 128 unique sounds - these are shown in the [table](#) in the Appendix for reference. "Banks" were created allowing unique collections of Programs - the idea being each Bank could hold up to 128 different patches. Most modern synthesizers or sound modules contain many Banks, each containing 128 unique sounds. The programs within these banks most often will NOT relate at all to the GM Patch list. The organization of these Banks are manufacturer-specific; some synths group Banks by sound type (piano, guitars, drums etc) and some merely use them as a collection of sounds. Banks are often named "A", "B", "C", "GM", etc; while the naming of Patches has apparently become a creative endeavor, deviating far from a description of the actual sound. Some synths will have patch names such as "Clean Strat" - far more descriptive than names like "Ice Cream Sunshine" which you will find all too often. You will need to have the patch and bank listing for your particular synthesizer handy to utilize the Program Change messages from Chirp. Chirp will only transmit the MIDI Program number and not the patch names.

For most soft synths, Bank change messages will not be necessary; the Program Change messages programmed into the Chirp Trigger Pads will allow fast changes to instrument sounds.

Sending Specific Controller Values

As in sending Program Changes, select the **Assignment** menu and choose **Trigger** from the drop down menu. Make sure to click the **Expert Settings** button to enter Expert Settings mode. For any trigger pad, click the box with the drop-down menu and select **Control**. The two data boxes can now be used to send a specific Controller Value. The top box is used for the Controller Value (see the [table](#) in the Appendix for a quick reference), and the lower box is used to hold the specific value you'd like to send.

Use the controller wheels for controllers "continuous" in nature such as Pitch bend or Modulation. Use these for On/Off controllers (#64 - 68 for example) or ones that require a specific value to be sent (such as Effects Depth, Chorus Depth, etc.)

RPN/NRPN Messages

The MIDI Specification defines two commands used by manufacturers to send device specific controller information. These are the:

- RPN - Registered Parameter Number (Common controllers "registered" with the MIDI Manufacturer's Association and included in the MIDI Spec)
- NRPN - Non-Registered parameter Numbers (manufacturer-specific controller messages.)

Consult the user manual of the specific synthesizer or MIDI device for RPN or NRPN values and their associated function.

Sending SYSEX Messages

SYSEX (or System Exclusive) MIDI Messages allow any manufacturer to create their own custom commands to control some aspect of a MIDI device. Unlike RPN and NRPN controller commands which conform to a specific message format, SYSEX messages can be whatever the manufacturer defined them to be.

SYSEX messages are sent in Hex format. Every SYSEX message starts with a Hex **F0** and ends with an **F7** (End SYSEX) byte. After the F0 byte, the message contains a Manufacturer's ID byte - these values are defined by the MIDI Manufacturers Association (MMA) and can be found in the General MIDI specifications. Most synthesizer or external hardware devices that allow a user to send SYSEX messages usually have a "parameter assignment table" or other reference tool detailing the format of available SYSEX commands.

SYSEX is sent by assigning a Trigger Pad a particular SYSEX message. Select the Assignment menu and select Trigger. Click on Expert Settings. Instead of just Note values and velocity assignments shown in the Simple Settings dialog, you can now

choose a command type to send. Pick a trigger pad to program and click on the drop down menu and choose SYSEX. One data field will be shown - you will type the SYSEX command here. Chirp takes care of the F0 and F7 bytes for you, so your SYSEX message will almost always begin with the Manufacturer's ID. Refer to your device manual for more help.

We'll provide an example here, but remember SYSEX message format and content is manufacturer specific. We made sure to set the Chirp MIDI Out (Keyboard - > Preferences) to the port and channel our XV-88 was on. Then, we programmed a trigger pad in Chirp to send a SYSEX command to our Roland XV-88 Synthesizer setting the CHORUS TYPE of PERFORMANCE COMMON to DELAY (DT1.) The XV-88 manual provided the command structure in Hex values as follows:

F0 - Exclusive Status (Start SYSEX)
41 - Roland ID
10 - Device ID (17)
00 10 - Model ID (XV-88)
12 - Command ID (DT1)
10 00 04 00 - Address
02 - Data
6A - Checksum
F7 - End SYSEX

Since Chirp takes care of the 1st and last bytes, we type into the Chirp SYSEX data field (with no spaces) **4110001012100004026A** and hit Save. When that trigger pad is now clicked, that command is sent to the Roland XV-88.

Using Chirp with Popular Music Software

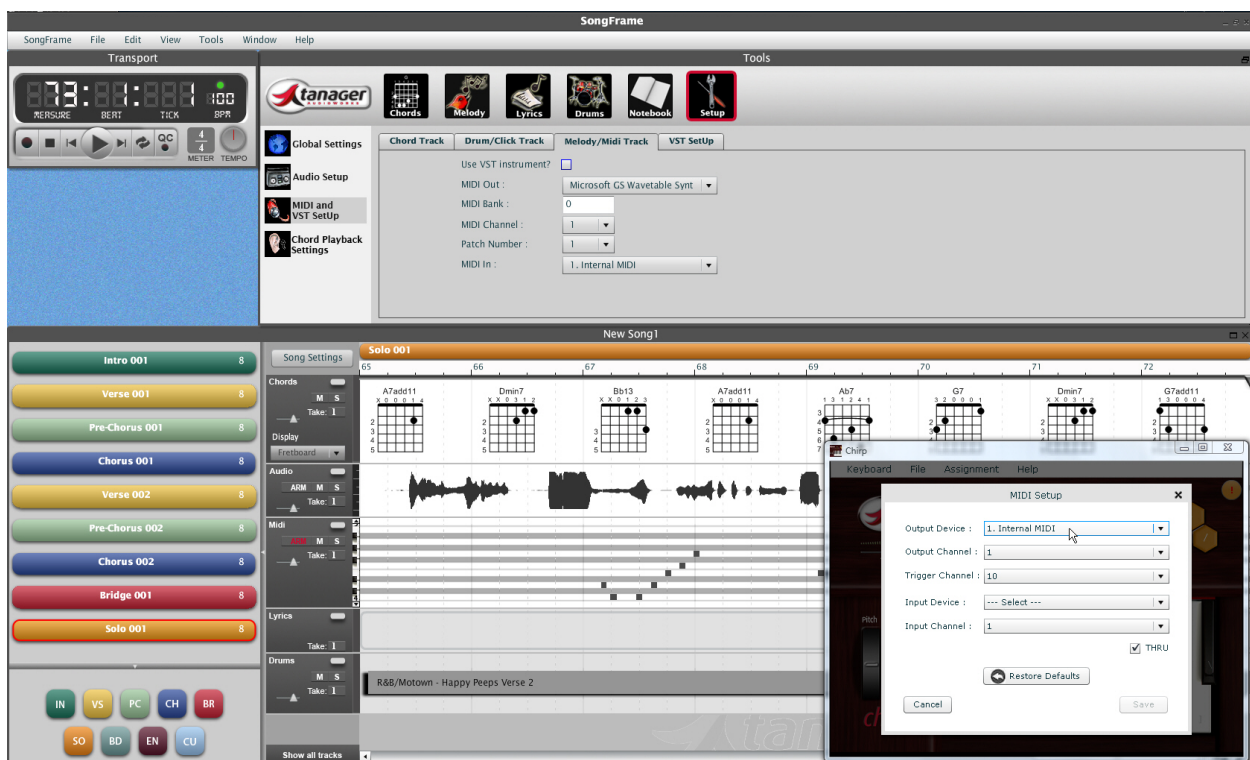
Songwriting Tools

SongFrame

Chirp was designed as the perfect add-on accessory for the SongFrame Songwriter's Toolkit software package. Chirp allows the user to use your laptop in conjunction with SongFrame as the ideal songwriting kit for that writing getaway without having to lug a ton of gear. More information on SongFrame can be found at:

<http://www.tanageraudioworks.com>

In SongFrame's **Setup->MIDI and VST Setup** menu, click on the **Melody/MIDI** track tab and at the bottom, set the **MIDI In** to "1.Internal MIDI." In Chirp, go to **File -> MIDI Setup** and set the **MIDI Output Device** to the same "1. Internal MIDI" port. Leave the Input Device selection blank.



What Is SongFrame?

SongFrame is the song development toolkit designed to provide songwriters and recording musicians an integrated and comprehensive set of tools for writing and refining songs. In addition to serving as an overall notebook for a songwriter's ideas, SongFrame allows the user to construct songs using drag & drop icons representing song structure elements and then fully develop every aspect of the song within these.

SongFrame is used before the songwriter ever fires up his or her Digital Audio Workstation (DAW) recording or sequencing software. As the name implies - SongFrame creates the framework, foundation and superstructure of a song prior to the recording, arrangement and production process. Think of SongFrame as a "pre-DAW" or a songwriting front-end to your existing recording or sequencing setup.

The inspiration for a great song can come from a great idea for a title, a catchy chord progression, a melody line, an interesting rhythmic idea, or even some lyric ideas scribbled on a napkin. SongFrame allows the songwriting process to begin with any of these starting points, and completely integrates all aspects of song development in one powerful and intuitive environment. Simply put, SongFrame is a professional application that focuses on the complete songwriting process and lets the user utilize their favorite instruments and recording environment to take the "framework" of the song to completion. Like any DAW application, SongFrame includes an audio engine, recording capability and a transport to control playback and recording. Unlike a DAW, its focus is on the song itself; structure, chord progressions, melodies, lyrics and rhythm. SongFrame exports MIDI and Audio files for easy import into any DAW application capable of importing audio and MIDI data. In addition, SongFrame can work with many VST software-based synths and instruments available, allowing a songwriter to take advantage of their favorite instrument sounds while composing. SongFrame can Export songs for use in the studio. Exported DAW Audio/MIDI files contain all song structure and chord markers, Audio and MIDI data, tempo map and key information, providing a head-start to the production process. In addition, SongFrame prints lead sheets for musicians to use in studio production and recording. The tool is 100% focused on the songwriting process and the elements that make up a song—the chord progressions, the melody and the rhythm, the overall structure and the lyrics. It is the perfect companion product to a DAW recording application for songwriters and recording musicians.

Sequencers and DAWs

ProTools

If Chirp was installed properly it should appear in the list of possible MIDI inputs and outputs in Pro Tools. In Chirp, select **File** then **MIDI Setup**. Set the **Output Device** to

1. Internal MIDI (for the PC) or **Bus1** (for the Mac.) Set the output channel to 1 (or whatever you'd like.)

Note - Leave the **Input Device** blank - especially if **THRU** is checked since you will create a MIDI data loop and crash Pro Tools!

Windows Pro Tools Setups

In Pro Tools, select the **Setup** menu, then choose **MIDI** and **MIDI Studio**. Click on Create to add **1. Internal MIDI** or **Bus1** to the MIDI list. On the right side of the dialog box, type Chirp in the Instrument Name field. (Tanager Audioworks does not appear in the preset list of manufacturers in Pro Tools.) Select Input Port and choose **1. Internal MIDI**, and select output Port and choose **1. Internal MIDI** or **Bus1**. Leave all the channel buttons alone below - these should all be blue (or selected.)

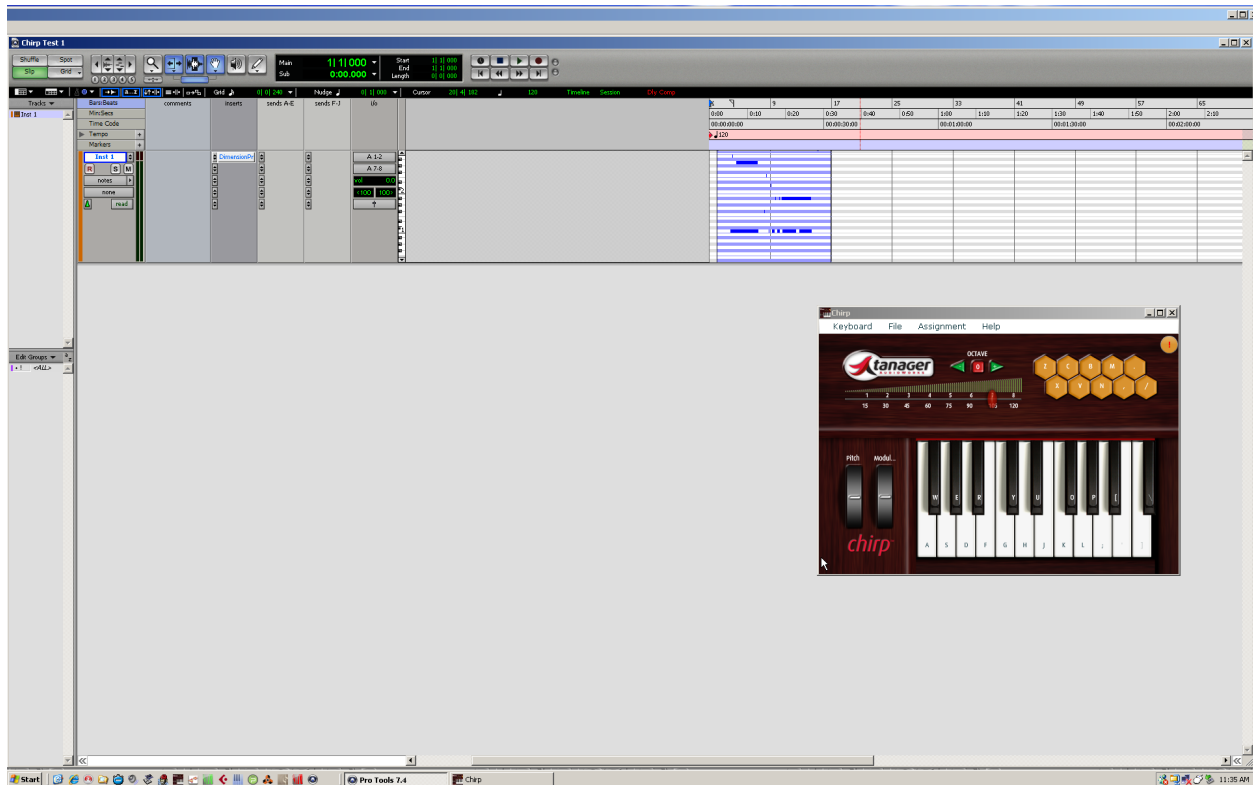
Go back to the **Setup** menu and choose **MIDI** then Input Devices. The **MIDI Input Enable** dialog appears; make sure the selected Internal MIDI Port is checked in this dialog box. Create an Instrument Track in Pro Tools. Insert a soft synth and load a preset sound. Chirp should play the instrument at this point.

Mac Pro Tools Setups

Set up your Mac to use the IAC Driver internal MIDI Bus. Load the Audio-MIDI Setup Utility (found under the **Applications -> Utilities** folder. Check the box labeled "**Device is online.**" This creates an internal "MIDI cable" you'll send data from Chirp to Pro Tools on. In Chirp, select **File -> MIDI Setup** and in the Output Device drop-down menu choose **Bus1**. This tells Chirp to send the MIDI output over that virtual MIDI cable called Bus1 rather than the Quicktime built in synth that is on by default when you first load up Chirp. If you try playing Chirp now - you'll hear nothing - because we need to route that MIDI data to a sound source - or in this case Pro Tools MIDI or Instrument track. In Pro Tools, go to **Setup -> Input Devices**. Make sure the IAC Driver Bus1 is checked.

Create a MIDI and AUX Track, or an Instrument Track. Make the input to the MIDI or Instrument Track the IAC Driver Bus 1. If you created a MIDI track, route the output to an AUX track with a soft synth loaded, and if you created and Instrument track insert a soft synth. Click on Chirp and play the keyboard - you should hear the synth playing.

Remember to click on Chirp to get the keyboard active - or set Chirp to "**Send Notes Always**" in the **Keyboard -> Preferences** menu to allow Chirp to send MIDI data when is not the focused application. The CAPS LOCK Key turns the Chirp functionality on or off when in this mode.



Reason

If Chirp was installed properly it should appear in the list of possible MIDI inputs and outputs in Reason. In Chirp, select **File** then **MIDI Setup**. Set the **Output Device** to **1. Internal MIDI** (for the PC) or **Bus1** (for the Mac.) Set the output channel to 1 (or whatever you'd like.)

To use Chirp with Reason you'll first need to ensure that Reason is set to "see" Chirp. Load Reason and select **Edit** then **Preferences** (Reason -> **Preferences** on the Mac.) Select **Keyboards and Control Surfaces** from the drop-down menu at the top of the page. Select **Add** and choose **<Other>** in the **Manufacturer** drop-down menu. In the **Model** dialog, select **MIDI Control Keyboard**. In the **Name** field, you can type "Chirp." **1. Internal MIDI** or **Bus 1** should be a choice in the **MIDI Input** drop-down menu. Select it and hit **OK**. You can now "X" out of the Preferences dialog box. Make sure an instrument sound is loaded in Reason. Click on Chirp and play it - you should hear that instrument sound. Every time you click on a different track in the Reason Sequencer, you should hear that sound play using Chirp.

A note on programming the Chirp Trigger Pads with Reason's Redrum Drum machine. ReDrum assigns MIDI note numbers to each of its 10 Modules (or drum sounds on each vertical control section.) The first module (usually loaded with a bass drum) is MIDI note number 36. Each subsequent module to the right increments by one (37,38,39,

etc.) Set up the trigger pads in Chirp so that the left most pad is MIDI Note 36, and continue mapping all pads to match the drum modules in Reason.

Remember to click on Chirp to get the keyboard active - or set Chirp to "**Send Notes Always**" in the **Keyboard** -> **Preferences** menu to allow Chirp to send MIDI data when is not the focused application. The CAPS LOCK Key turns the Chirp functionality on or off when in this mode.

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SONAR

If Chirp has been properly installed, it should appear in the list of possible MIDI input and output choices in SONAR. Load SONAR and click on **Options**, then **MIDI Devices**. Find "**1. Internal MIDI**" in the input and output dialog boxes and make sure they are selected. Insert any soft synth track (Dimension for example) by choosing **Insert -> Soft Synths** and selecting the one you want. In the track controls area choose **Chirp Omni** as the MIDI input selection. Dimension will listen for data on any channel Chirp has been set to transmit on. In Chirp, go to **File -> MIDI Setup** and make sure the Output is set to **1. Internal MIDI**. Set Channel to 1 (although this setting should not matter if you are using the MIDI Omni capability in SONAR just mentioned.) Load a preset in Dimension - Chirp should play it. (Be sure the octave setting matches the Preset's key mappings.)

Note - Leave the **Input Device** blank - especially if **THRU** is checked since you will create a MIDI data loop and crash SONAR!

Remember to click on Chirp to get the keyboard active - or set Chirp to "**Send Notes Always**" in the **Keyboard -> Preferences** menu to allow Chirp to send MIDI data when is not the focused application. The CAPS LOCK Key turns the Chirp functionality on or off when in this mode.



GarageBand

Chirp Virtual MIDI Keyboard Controller User Guide (Build 2.0)

When you first load Chirp on a Mac, you'll hear a grand piano sound when you play it – this is coming from the Mac's built-in Quicktime Music Synthesizer. To use Chirp in GarageBand, you need to tell the Mac to look at a specific MIDI Port which is mapped to see Chirp's output – we use the Mac's IAC Driver to do this. The IAC Driver setup can be found in the Audio-MIDI Setup utility found under the Utilities Folder in the Applications Folder. Load Audio-MIDI setup, click on the MIDI tab, and double click the IAC Driver icon. Make sure "Device is online" is checked. Chirp will be attached to Bus 1 by default. (IAC stands for "Inter-Application Communications", and allows one MIDI application (such as Chirp) talk to other applications (such as GarageBand, Logic Pro and Digital Performer.)

In Chirp's MIDI Setup dialog (File -> MIDI Setup) make sure the Output Device is set to Bus 1 (matching what the IAC Driver's virtual MIDI port was named) and the Output Channel is on Channel 1. GarageBand listens to all MIDI channels at the same time, so unfortunately there is no way to utilize Chirp's ability to map the trigger pads to a different MIDI (for drum sounds as an example.)

Load GarageBand and create a Software Instrument Track. Click on Chirp –you should hear the Software Instrument sounds being played by Chirp. To ensure that you can keep your focus on recording parts in GarageBand, make sure the "Send Notes Always" selection is checked on Chirp's Preferences page (Keyboard -> Preferences.)

This allows Chirp to continue playing even when it is not the focus application. With this setup, any track in GarageBand that is highlighted should be able to be played with Chirp. The CAPS LOCK Key turns the Chirp functionality on or off when in this mode.



Remember to click on Chirp to get the keyboard active - or set Chirp to "**Send Notes Always**" in the **Keyboard -> Preferences** menu to allow Chirp to send MIDI data when is not the focused application.

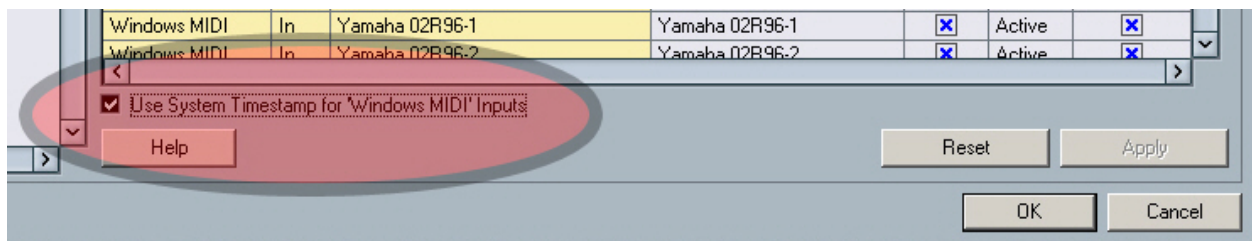
Cubase

If Chirp was installed properly it should appear in the list of possible MIDI inputs and outputs in Cubase. In Chirp, select **File** then **MIDI Setup**. Set the **Output Device** to **1. Internal MIDI** (for the PC) or **Bus1** (for the Mac.). Set the output channel to 1 (or whatever you'd like.)

Load Cubase and select the **Devices** menu. Click on **Device Setup** at the bottom of the list. Click on **MIDI Port Setup** located under the **MIDI** folder on the top left. **1. Internal MIDI** or **Bus1** should appear as a MIDI Input port (in yellow) and **1. Internal MIDI** or **Bus1** should show up further down the list as a MIDI output (in blue.) Create an Instrument Track, and in the track controls panel to the left load a soft synth or other sound source onto that track. Choose **1. Internal MIDI** or **Bus1** as the MIDI source. Chirp should play the sound loaded on that track.

Remember to click on Chirp to get the keyboard active - or set Chirp to "**Send Notes Always**" in the **Keyboard -> Preferences** menu to allow Chirp to send MIDI data when is not the focused application.

One more thing about Windows Cubase 4 - you may experience an issue where you think you have everything set up properly, but when you try recording all the notes end up bunched up at the beginning of the MIDI Track. To fix this, you need to go to the **Devices -> Device Setup** menu; at the bottom of the list of MIDI input and output ports, you'll need to check the box that says "**Use System Timestamp for Windows MIDI Inputs**" as shown below. Steinberg places this menu item there to overcome some issues with the DirectSound drivers associated with MIDI in Windows. This link http://knowledgebase.steinberg.de/95_1.html can tell you more. The CAPS LOCK Key turns the Chirp functionality on or off when in this mode.





Ableton Live

If Chirp was installed properly it should appear in the list of possible MIDI inputs and outputs in Ableton Live. In Chirp, select **File** then **MIDI Setup**. Set the **Output Device** to **1. Internal MIDI** (for the PC) or **Bus1** (for the Mac.) Set the output channel to 1 (or whatever you'd like.)

Load Ableton Live. In the **Options** menu, select **Preferences** at the bottom of the list. Select the **MIDI/Sync** tab. If Chirp is properly installed, it will show up in the **MIDI Ports** section of the dialog box. **1. Internal MIDI** or **Bus1** should be selected and "on" for one of the inputs.

In an empty MIDI track, drag in a plug-in instrument, load a patch, and arm the track for recording with the button at the bottom. You should hear the sound as you play Chirp.

Remember to click on Chirp to get the keyboard active - or set Chirp to "**Send Notes Always**" in the **Keyboard -> Preferences** menu to allow Chirp to send MIDI data when is not the focused application. The CAPS LOCK Key turns the Chirp functionality on or off when in this mode.



Logic Pro

When you first load Chirp on a Mac, you'll hear a grand piano sound when you play it – this is coming from the Mac's built-in Quicktime Music Synthesizer. To use Chirp in Logic Pro, you need to tell the Mac to look at a specific MIDI Port which is mapped to see Chirp's output – we use the Mac's IAC Driver to do this. The IAC Driver setup can be found in the Audio-MIDI Setup utility found under the Utilities Folder in the Applications Folder. Load Audio-MIDI setup, click on the MIDI tab, and double click the IAC Driver icon. Make sure "Device is online" is checked. Chirp will be attached to Bus 1 by default. (IAC stands for "Inter-Application Communications", and allows one MIDI application (such as Chirp) talk to other applications (such as GarageBand, Logic Pro and Digital Performer.)

Chirp Virtual MIDI Keyboard Controller User Guide (Build 2.0)

In Chirp's MIDI Setup dialog (File -> MIDI Setup) make sure the Output Device is set to Bus 1 (matching what the IAC Driver's virtual MIDI port was named) and the Output Channel is on Channel 1. Do the same for the Input Channel settings.

Load Logic Pro. Set up an Instrument Track with a sound you like. You should hear the selected instrument play. The CAPS LOCK Key turns the Chirp functionality on or off when in this mode.



Remember to click on Chirp to get the keyboard active - or set Chirp to "**Send Notes Always**" in the **Keyboard -> Preferences** menu to allow Chirp to send MIDI data when is not the focused application.

Digital Performer

When you first load Chirp on a Mac, you'll hear a grand piano sound when you play it – this is coming from the Mac's built-in Quicktime Music Synthesizer. To use Chirp in Digital Performer, you need to tell the Mac to look at a specific MIDI Port which is mapped to see Chirp's output – we use the Mac's IAC Driver to do this. The IAC Driver setup can be found in the Audio-MIDI Setup utility found under the Utilities Folder in the Applications Folder. Load Audio-MIDI setup, click on the MIDI tab, and double click the IAC Driver icon. Make sure "Device is online" is checked. Chirp will be attached to Bus 1 by default. (IAC stands for "Inter-Application Communications", and allows one

MIDI application (such as Chirp) talk to other applications (such as GarageBand, Logic Pro and Digital Performer.)

In Chirp's MIDI Setup dialog (File -> MIDI Setup) make sure the Output Device is set to Bus 1 (matching what the IAC Driver's virtual MIDI port was named) and the Output Channel is on Channel 1. Do the same for the Input Channel settings.

Load Digital Performer. The IAC Driver should be shown in Digital Performer as a MIDI input. Create a MIDI Track and an Instrument Track. Load any of the supplied soft synths on the Instrument track and make sure the output is set for the appropriate audio device. On the MIDI Track, set the output to the name of the soft synth you just loaded. If the Multi Record mode is off (unchecked and found in the Studio Menu) then DP will listen on all MIDI channels for track input – Chirp should play the soft synth sound at this point. The CAPS LOCK Key turns the Chirp functionality on or off when in this mode.



Remember to click on Chirp to get the keyboard active - or set Chirp to **"Send Notes Always"** in the **Keyboard -> Preferences** menu to allow Chirp to send MIDI data when is not the focused application.

Project 5 V2

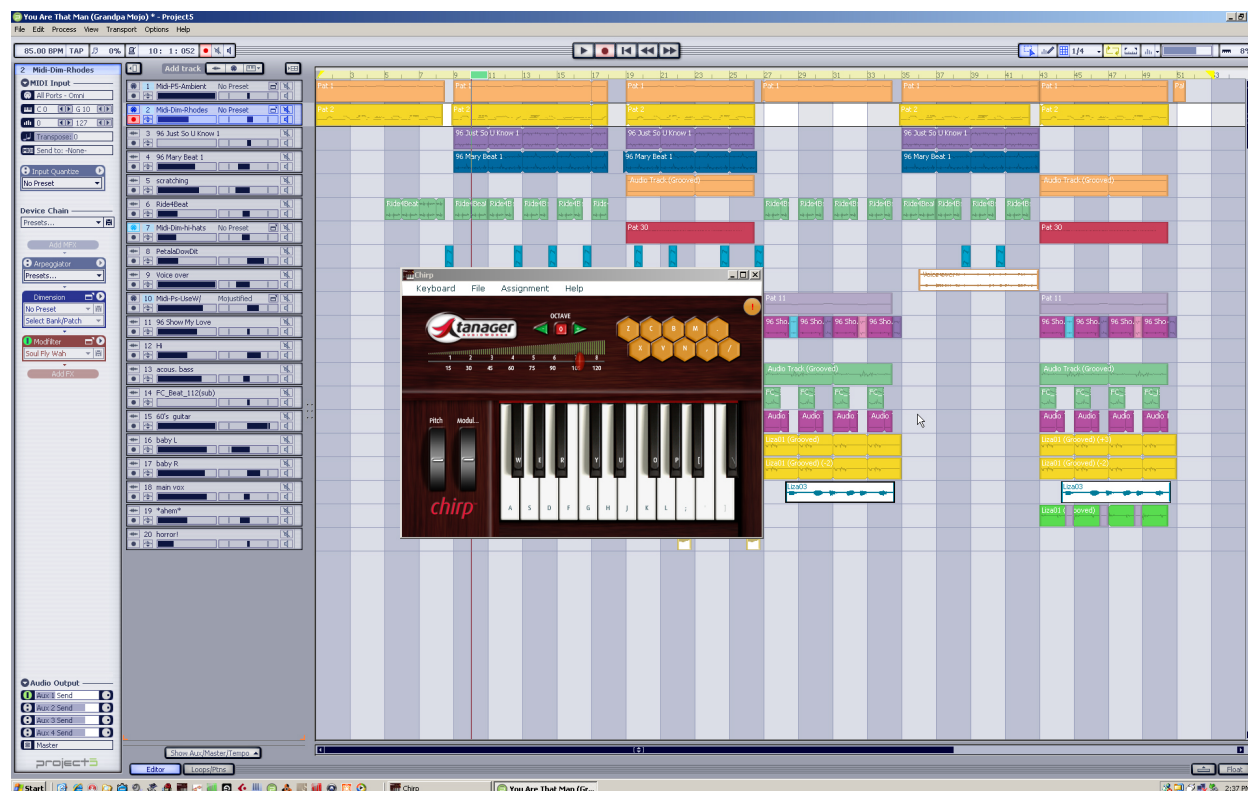
Chirp Virtual MIDI Keyboard Controller User Guide (Build 2.0)

If Chirp was installed properly it should appear in the list of possible MIDI inputs and outputs in Project 5. In Chirp, select **File** then **MIDI Setup**. Set the **Output Device** to **1. Internal MIDI**. Set the output channel to 1 (or whatever you'd like.)

Load Project 5. Go to the **Options** menu, and select **MIDI Devices** at the top of the list. If Chirp installed correctly, **1. Internal MIDI** should be listed as an **Available MIDI Input Device** in the 1st box. Click on the small right arrow to add it to the **Active MIDI Input Ports**.

Load a MIDI track and select **Add Instrument** on the track controls pane to the left. Load a sound, and play Chirp - you should hear that sound playing.

Remember to click on Chirp to get the keyboard active - or set Chirp to "**Send Notes Always**" in the **Keyboard -> Preferences** menu to allow Chirp to send MIDI data when is not the focused application. The CAPS LOCK Key turns the Chirp functionality on or off when in this mode.

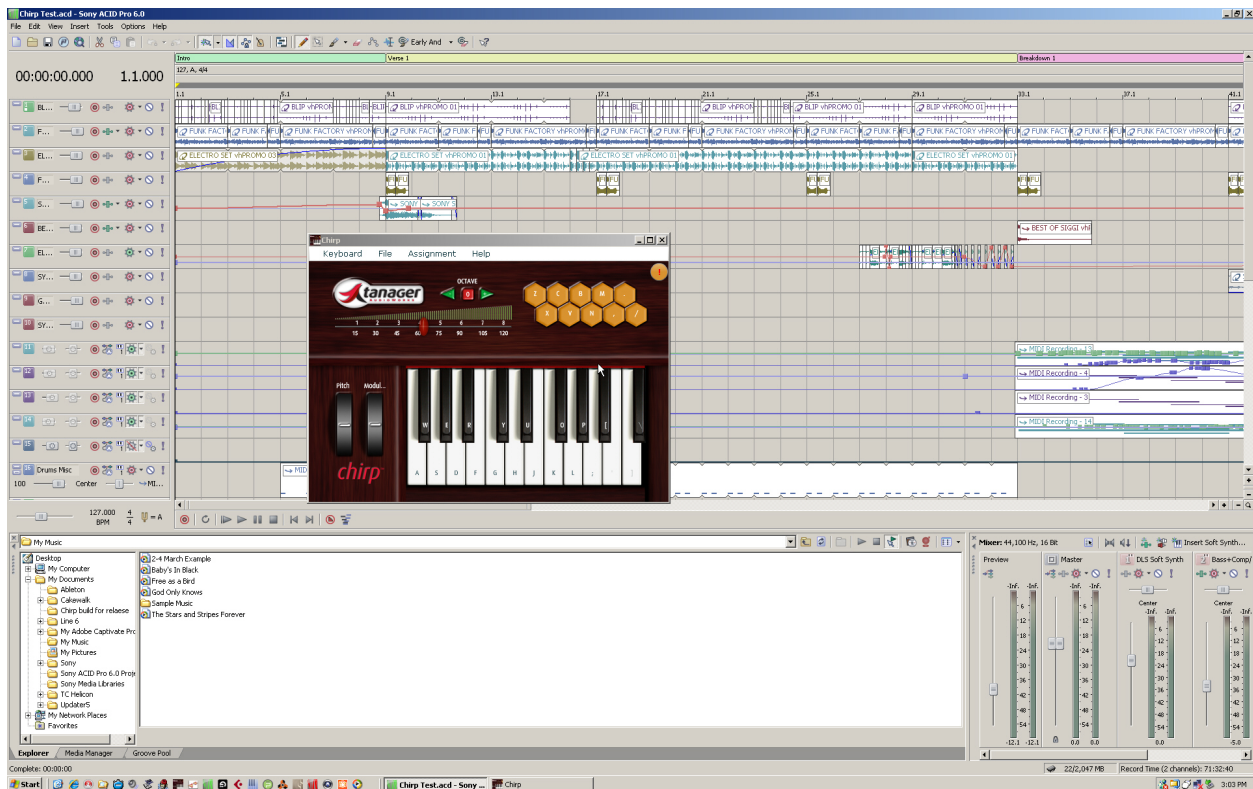


ACID Pro

If Chirp was installed properly it should appear in the list of possible MIDI inputs and outputs in ACID Pro. In Chirp, select **File** then **MIDI Setup**. Set the **Output Device** to **1. Internal MIDI**. Set the output channel to 1 (or whatever you'd like.)

Load ACID Pro. Select **Options** then **Preferences**. Click on the **MIDI** tab and you should see **1. Internal MIDI** in the respective MIDI In/Out dialog boxes - make sure these are checked. Click **OK** and select **Insert** then **Soft Synth**. Choose any soft synth in the list. Make sure the MIDI Input in the Track Controls area of the Soft Synth track is set to **1. Internal MIDI**, and the **MIDI Channel** setting further down that dialog box is set to either **ALL** or the specific channel you set up in Chirp as an output channel. Make sure you have a preset sound loaded in your soft synth. Chirp should play the sound now.

Remember to click on Chirp to get the keyboard active - or set Chirp to "**Send Notes Always**" in the **Keyboard -> Preferences** menu to allow Chirp to send MIDI data when is not the focused application. The CAPS LOCK Key turns the Chirp functionality on or off when in this mode.



Notation

Sibelius

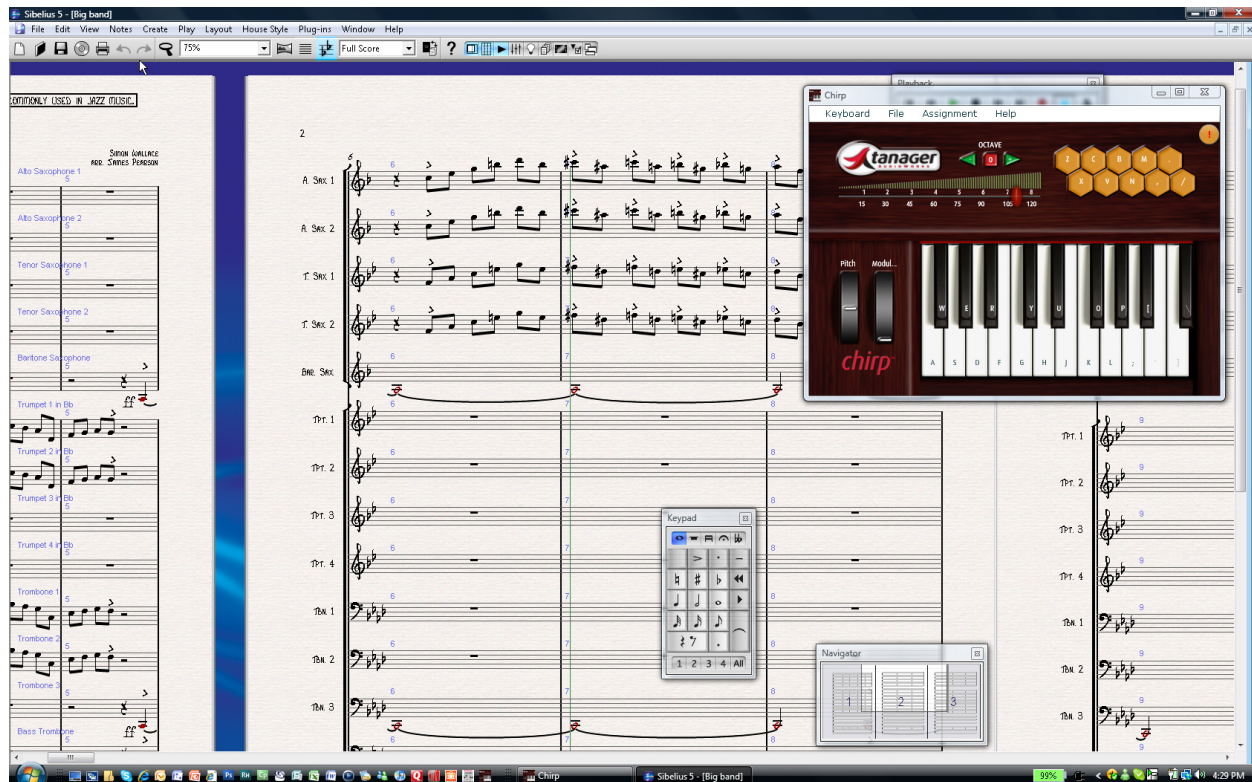
If Chirp was installed properly it should appear in the list of possible MIDI inputs and outputs in Sibelius. In Chirp, select **File** then **MIDI Setup**. Set the **Output Device** to **1. Internal MIDI**. Set the output channel to 1 (or whatever you'd like.)

Chirp Virtual MIDI Keyboard Controller User Guide (Build 2.0)

Load Sibelius. Click on **File**, then select **Preferences**. Select Input Devices - if Chirp installed properly then **1. Internal MIDI** should be listed as a possible input device.

Check the box in front of it and then click OK. Chirp should produce note data when played.

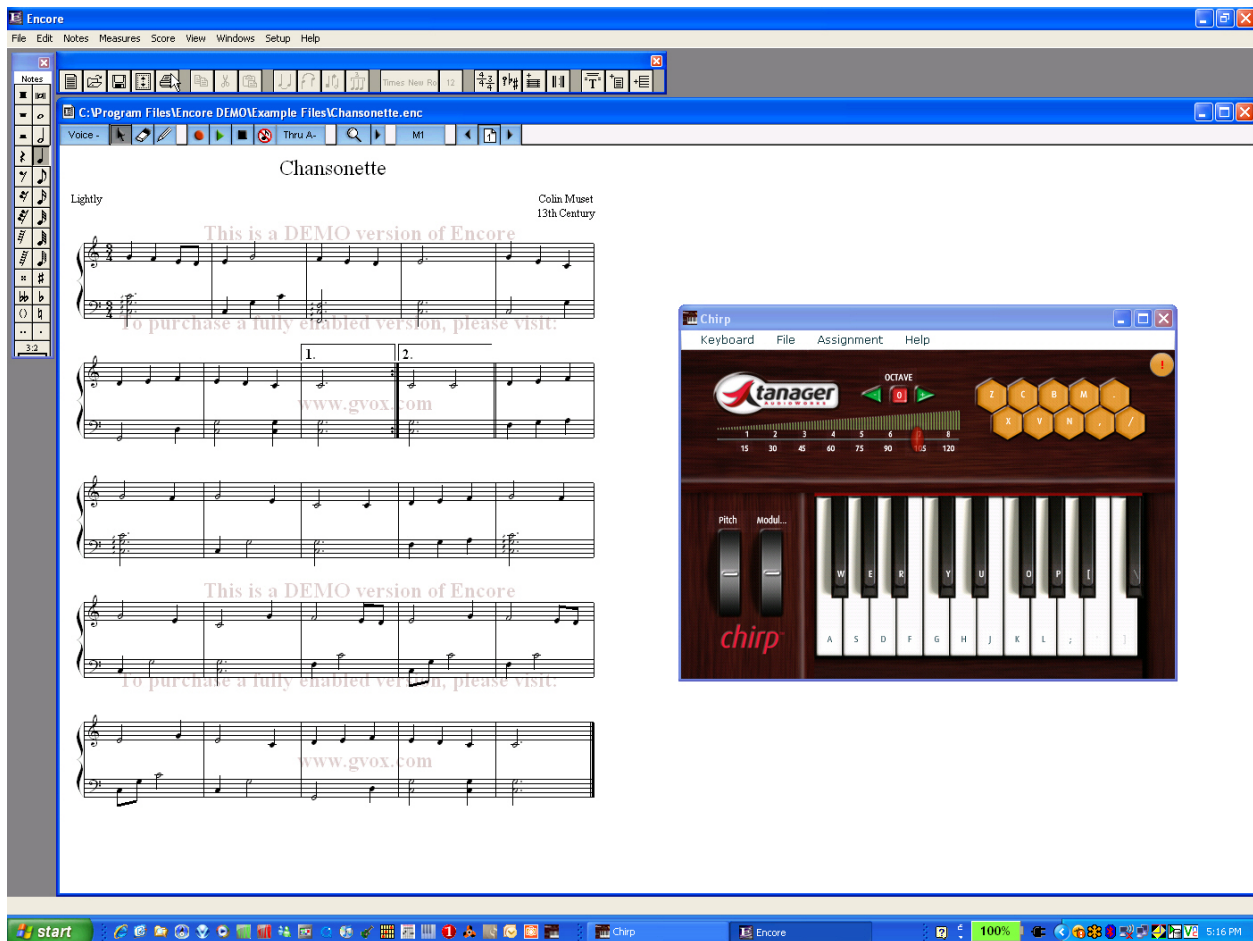
Remember to click on Chirp to get the keyboard active - or set Chirp to "**Send Notes Always**" in the **Keyboard -> Preferences** menu to allow Chirp to send MIDI data when is not the focused application. The CAPS LOCK Key turns the Chirp functionality on or off when in this mode.



Encore

If Chirp was installed properly it should appear in the list of possible MIDI inputs and outputs in Encore. In Chirp, select **File** then **MIDI Setup**. Set the **Output Device** to **1. Internal MIDI**. Set the output channel to 1 (or whatever you'd like.)

Load Encore. Go to the **Setup** menu, and select MIDI Setup. You will see MIDI Out and MIDI In setup dialogs there - if Chirp was installed properly it should show up in both drop-down menus. Select **1. Internal MIDI** in the MIDI In setup section. The CAPS LOCK Key turns the Chirp functionality on or off when in this mode.



Samplers and Soft Synths

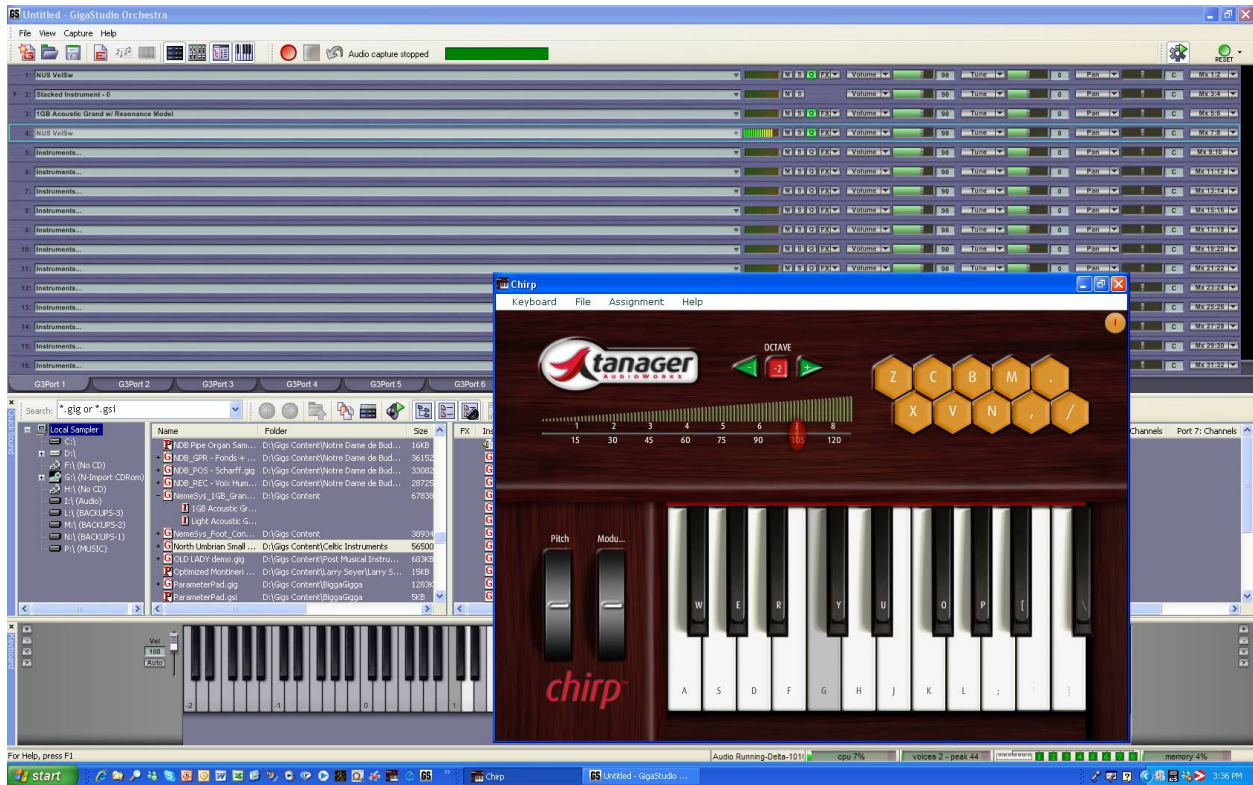
GigaStudio

If Chirp was installed properly it should appear in the list of possible MIDI inputs and outputs in GigaStudio. In Chirp, select **File** then **MIDI Setup**. Set the **Output Device** to **1. Internal MIDI**. Set the output channel to 2 (we noticed on our setup that the Chirp MIDI output channel was linked to the Instruments in the MIDI Mixer offset by -1. So - the first Instrument track set up in Giga wouldn't play, but when we set an Instrument up in the 2nd space, we could play it with Chirp on MIDI Channel 1. An Instrument on the 3rd space worked with Chirp Channel 2, and so on.)

Load GigaStudio. In the File menu, select System Settings. At the bottom of this dialog box is the MIDI Port Configuration setup controls. Choose **1. Internal MIDI** from the list in the drop-down menu in one of the empty MIDI Input assignments. Hit OK. Load an

Chirp Virtual MIDI Keyboard Controller User Guide (Build 2.0)

instrument in the 2nd position and play Chirp - you should hear the instrument playing. The CAPS LOCK Key turns the Chirp functionality on or off when in this mode.



Troubleshooting

Technical Support for Chirp

We want to be absolutely sure that you get the most out of Chirp, which is why we went to the effort of providing setup instructions for the popular music applications. But - as anybody who has ever fooled around with music and MIDI hardware & software knows, this stuff can be tricky and downright frustrating at times! MIDI and other drivers don't always play nice together, and the sheer number of variables involved with these computer platforms, installed hardware and software can cause all kinds of problems. If you followed the instructions in this manual and still are having problems getting your setup to work, please contact us.

Check out the help documents for Chirp at www.tanageraudioworks.com or EMAIL us directly at support@tanageraudioworks.com.

Top Issues FAQ

The latest troubleshooting information can be found on our website at:

<http://www.tanageraudioworks.com>

Here are some issues that crop up from time to time with our Chirp customers.

Platform	Issue	Solution
Windows	Chirp not operating properly after it has been installed.	Make sure you have installed the Microsoft .NET Framework (V2.0 or later). This is available from the Microsoft .NET Framework Solutions Center page at http://support.microsoft.com/?scid=ph;en-us;548
Mac	Cannot get the "Send Notes Always" feature to work properly.	Under Universal Access in the System Preferences menu on your Mac, be sure to check the box at the bottom of the dialog that says Enable access for assistive devices . This option is required in order for the Send Notes Always capability in Chirp to operate properly.
Windows + Cubase 4	Notes end up "bunched up" at the start of the track after you record a MIDI or Instrument	To fix this, you need to go to the Devices -> Device Setup menu; at the bottom of the list of MIDI input and output ports, you'll need to check the box that says " Use System Timestamp for Windows MIDI Inputs " as

	track.	shown below. Steinberg places this menu item there to overcome some issues with the DirectSound drivers associated with MIDI in Windows. This link http://knowledgebase.steinberg.de/95_1.html can tell you more.
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Applications

Ideas for Using Chirp

While you will likely not play your next piano recital using Chirp, you can utilize it effectively for creating all kinds of MIDI parts. Besides chord entry, we often use Chirp to just enter any MIDI notes in time and note duration with the part we are trying to create, and then use the DAW Piano Roll view to drag the notes in place. We find this method quite effective, especially in creating string and orchestral parts where the biggest challenge in a cramped space (like an airplane seat) is just getting MIDI data into the DAW in time.

In notation tools, we make use of the chord entry ability in Chirp. Most notation entry is step-oriented, and this allows us to quickly enter chord parts.

Appendix

LoopBe30 MIDI Loopback Driver

In order to communicate with other software applications on your system, Chirp Windows requires a piece of software called a MIDI Loopback driver. This is software that routes incoming and outgoing MIDI messages to different destinations on your machine, either software ports or external hardware devices. We include with Chirp the LoopBe30 from Nerds.de.

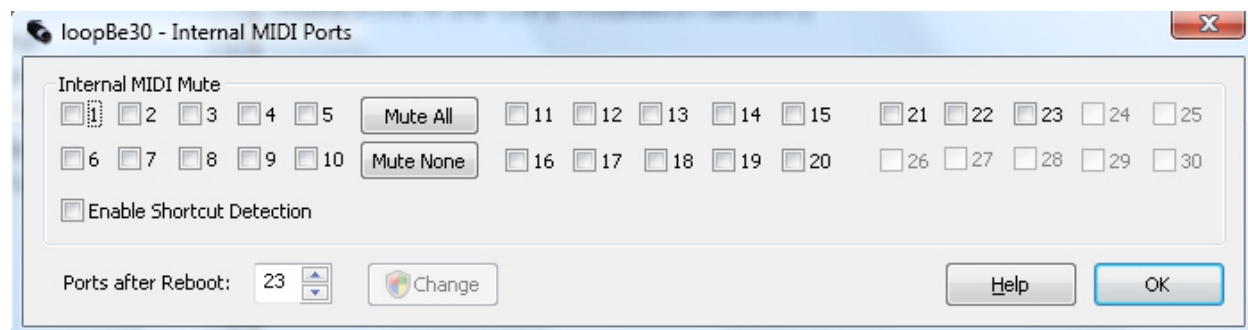
(Macintosh users do not need to install anything, OSX comes with a built in loopback driver called "IAC" (standing for Inter-Application Communication). It simply needs to be turned on and named in Audio/MIDI setup - found in Applications/Utilities. There are more detailed instructions in the Chirp Installation section.)

LoopBe30 Highlights (From the www.nerds.de website):

- LoopBe30 provides 30 independent "invisible cables" to connect MIDI out ports of applications to any other application's MIDI in port.
- You may connect up to 8 applications to every single in port and up to 8 application to every single out port, all sending and receiving at the same time. Every port provides the full 16 MIDI channels.
- Near Zero Latency.
- LoopBe30 is a native Windows™ 2k/XP/Vista WDM kernel mode driver. Expect the lowest possible latency.
- Adjustable Number of ports - 1 to 30 in Windows XP / Vista (1 to 9 in Windows 2000)
- You can mute each MIDI port individually. A muted port behaves similarly to an audio device. All data sent to the port is simply discarded, but the sending application will not realize anything.
- Enable or disable powerful MIDI Shortcut / Feedback Detection.
- LoopBe30 comes with powerful shortcut detection. It mutes its ports if the data rate is higher than the MIDI specification of 31.25 kbps. Sometimes it might be necessary or desirable to send more data, for example by sending excessive MIDI polyphonic aftertouch messages. A hardware legacy device would fail here, but not LoopBe30. If you want to send more data than allowed by the spec, and you are sure your setup is shortcut free, simply disable the shortcut detection.
- Faster than a legacy Hardware Interface.
- With the shortcut detection switched off you can send more MIDI data than would ever be possible with a hardware interface and a real MIDI cable.

Chirp Windows makes use of this tool as does other Tanager AudioWorks products including the SongFrame Songwriter's Toolkit software.

LoopBe30 places an icon  in your System Tray that allows you to access its front panel. You can modify the settings with this panel shown below.



MIDI Note Values for Drum Sounds – General MIDI Standard

Midi Note	Note Name	GM Drum Sound
35	B0	Acoustic Kick Drum
36	C1	Kick Drum 1
37	C#1	Side Stick/Rim Shot
38	D1	Acoustic Snare
39	D#1	Hand Clap
40	E1	Electric Snare
41	F1	Low Floor Tom
42	F#1	Closed Hi-Hat
43	G1	High Floor Tom
44	G#1	Pedal Hi-Hat
45	A1	Low Tom
46	A#1	Open Hi-Hat
47	B1	Low-Mid Tom
48	C2	Hi-Mid Tom
49	C#2	Crash Cymbal 1
50	D2	High Tom
51	D#2	Ride Cymbal 1
52	E2	China Cymbal
53	F2	Ride Cymbal Bell
54	F#2	Tambourine
55	G2	Splash Cymbal
56	G#2	Cowbell

57	A2	Crash Cymbal 2
58	A#2	Vibraslap
59	B2	Ride Cymbal 2
60	C3	Hi Bongo
61	C#3	Low Bongo
62	D3	Mute Hi Conga
63	D#3	Open Hi Conga
64	E3	Low Conga
65	F3	High Timbale
66	F#3	Low Timbale
67	G3	High Agogo
68	G#3	Low Agogo
69	A3	Cabasa
70	A#3	Maracas
71	B3	Short Whistle
72	C4	Long Whistle
73	C#4	Short Guiro
74	D4	Long Guiro
75	D#4	Claves
76	E4	Hi Wood Block
77	F4	Low Wood Block
78	F#4	Mute Cuica
79	G4	Open Cuica
80	G#4	Mute Triangle
81	A4	Open Triangle

MIDI Note Values for Drum Sounds – General MIDI Standard

Group	Program #	Sound (Patch)
Pianos	1	Acoustic Grand Piano
	2	Bright Acoustic Piano
	3	Electric Grand Piano
	4	Honky-Tonk Piano
	5	Electric Piano 1
	6	Electric Piano 2
	7	Harpsicord
	8	Clavinet
Chromatic Percussion	9	Celesta
	10	Glockenspiel
	11	Music Box

	12	Vibraphone
	13	Marimba
	14	Xylophone
	15	Tubular Bells
	16	Dulcimer
Organs	17	Drawbar Organ
	18	Percussive Organ
	19	Rock Organ
	20	Church Organ
	21	Reed Organ
	22	Accordian
	23	Harmonica
	24	Tango Accordian
Guitars	25	Acoustic Guitar – Nylon Strings
	26	Acoustic Guitar – Steel Strings
	27	Electric Guitar – Jazz
	28	Electric Guitar – Clean
	29	Electric Guitar – Muted
	30	Overdriven Guitar
	31	Distortion Guitar
	32	Guitar Harmonics
Basses	33	Acoustic Bass
	34	Electric Bass – Finger
	35	Electric Bass – Picked
	36	Fretless Bass
	37	Slap Bass 1
	38	Slap Bass 2
	39	Synth Bass 1
	40	Synth Bass 2
Strings	41	Violin
	42	Viola
	43	Cello
	44	Contrabass
	45	Tremelo Strings
	46	Pizzicato Strings
	47	Orchestral Harp
	48	Timpani
Ensemble	49	String Ensemble 1
	50	String Ensemble 2
	51	Synth Strings 1
	52	Synth Strings 2

	53	Choir Aahs
	54	Voice Oohs
	55	Synth Voice
	56	Orchestra Hit
Brass	57	Trumpet
	58	Trombone
	59	Tuba
	60	Muted Trumpet
	61	French Horn
	62	Brass Section
	63	Synth Brass 1
	64	Synth Brass 2
Reed	65	Soprano Sax
	66	Alto Sax
	67	Tenor Sax
	68	Baritone Sax
	69	Oboe
	70	English Horn
	71	Bassoon
Pipe	72	Clarinet
	73	Piccolo
	74	Flute
	75	Recorder
	76	Pan Flute
	77	Blown Bottle
	78	Skakuhachi
	79	Whistle
	80	Ocarina

Group	Program #	Sound (Patch)
Synth Leads	81	Lead 1 - Square
	82	Lead 2 – Sawtooth
	83	Lead 3 – Calliope
	84	Lead 4 – Chiff
	85	Lead 5 – Charang
	86	Lead 6 – Voice
	87	Lead 7 – Fifths
	88	Lead 8 – Bass + Lead
Synth Pads	89	Pad 1 – New Age
	90	Pad 2 – Warm

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	91	Pad 3 – Polysynth
	92	Pad 4 – Choir
	93	Pad 5 – Bowed
	94	Pad 6 – Metallic
	95	Pad 7 – Halo
	96	Pad 8 - Sweep
Synth Effects	97	FX 1 – Rain
	98	FX 2 – Soundtrack
	99	FX 3 – Crystal
	100	FX 4 – Atmosphere
	101	FX 5 – Brightness
	102	FX 6 – Goblins
	103	FX 7 – Echoes
	104	FX 8 – Sci-Fi
Ethnic	105	Sitar
	106	Banjo
	107	Shamisen
	108	Koto
	109	Kalimba
	110	Bagpipe
	111	Fiddle
	112	Shanai
Percussive	113	Tinkle Bell
	114	Agogo
	115	Steel Drums
	116	Woodblock
	117	Taiko Drum
	118	Melodic Drum
	119	Synth Drum
	120	Reverse Cymbal
Sound Effects	121	Guitar Fret Noise
	122	Breath Noise
	123	Seashore
	124	Bird Tweet
	125	Telephone Ring
	126	Helicopter
	127	Applause
	128	Gunshot

MIDI Note Values for Continuous Controllers - General MIDI Standard

	Controller #	Controller Name	Notes
High Resolution Continuous Controllers (MSB and LSB Pairs)	0	Bank Select Coarse (MSB)	Switches between groups of sound banks in a synth or module.
	1	Modulation Wheel Coarse (MSB)	Usually adds some sort of vibrato effect to the note being played.
	2	Breath Control	
	3	Undefined	
	4	Foot Controller	Can be used to control a variety of effects such as an organ's swell pedal.
	5	Portamento Time	Portamento is defined as the time it takes for the pitch of a note to slide up or down to the pitch of another note.
	6	Data Entry	Provides the ability to send a RPN or NRPN data value to a synth or sound module.
	7	Channel Volume	Controls the main volume of a MIDI channel.
	8	Balance	Adjusts the volume of stereo elements of a sound without affecting the Pan position.
	9	Undefined	
	10	Pan	Pans a mono sound between left (0) and right (127). 64 is the Center position.
	11	Expression	Acts as a percentage of the volume controller (#7) – controls.
	12	Effect Control 1	Operation depends on the device or soft synth being controlled.
	13	Effect Control 2	Operation depends on the device or soft synth being controlled.
	14	Undefined	
	15	Undefined	
	16	General Purpose Controller 1	Operation depends on the

		device or soft synth being controlled.
17	General Purpose Controller 2	Operation depends on the device or soft synth being controlled.
18	General Purpose Controller 3	Operation depends on the device or soft synth being controlled.
19	General Purpose Controller 4	Operation depends on the device or soft synth being controlled.
20	Undefined	
21	Undefined	
22	Undefined	
23	Undefined	
24	Undefined	
25	Undefined	
26	Undefined	
27	Undefined	
28	Undefined	
29	Undefined	
30	Undefined	
31	Undefined	
32	Bank Select Fine (LSB)	Switches between groups of sound banks in a synth or module.
33	Modulation Wheel Fine (LSB)	Adds more definition to the main controller value for this parameter.
34	Breath Control Fine (LSB)	Adds more definition to the main controller value for this parameter.
35	Undefined	
36	Foot Controller Fine (LSB)	Adds more definition to the main controller value for this parameter.
37	Portamento Time Fine (LSB)	Adds more definition to the main controller value for this parameter.
38	Data Entry	
39	Channel Volume Fine (LSB)	Adds more definition to the main controller value for this parameter.
40	Balance Fine (LSB)	Adds more definition to the

			main controller value for this parameter.
	41	Undefined	
	42	Pan Fine (LSB)	Adds more definition to the main controller value for this parameter.
	43	Expression	Adds more definition to the main controller value for this parameter.
	44	Effect Control 1	Adds more definition to the main controller value for this parameter.
	45	Effect Control 2	Adds more definition to the main controller value for this parameter.
	46	Undefined	
	47	Undefined	
	48	General Purpose Controller 1	Adds more definition to the main controller value for this parameter.
	49	General Purpose Controller 2	Adds more definition to the main controller value for this parameter.
	50	General Purpose Controller 3	Adds more definition to the main controller value for this parameter.
	51	General Purpose Controller 4	Adds more definition to the main controller value for this parameter.
Low Resolution Continuous Controllers	52	Undefined	
	53	Undefined	
	54	Undefined	
	55	Undefined	
	56	Undefined	
	57	Undefined	
	58	Undefined	
	59	Undefined	
	60	Undefined	
	61	Undefined	
	62	Undefined	
	63	Undefined	
	64	Damper Pedal On/Off (Sustain)	
	65	Portamento On/Off	

66	Sostenuto On/Off
67	Soft Pedal On/Off
68	Legato Footswitch On/Off
69	Hold 2
70	Sound Controller 1
71	Sound Controller 2
72	Sound Controller 3
73	Sound Controller 4
74	Sound Controller 5
75	Sound Controller 6
76	Sound Controller 7

Low Resolution Continuous Controllers		
Low Resolution Continuous Controllers	77	Sound Controller 8
	78	Sound Controller 9
	79	Sound Controller 10
	80	General Purpose Control
	81	General Purpose Control
	82	General Purpose Control
	83	General Purpose Control
	84	Portamento Control
	85	Undefined
	86	Undefined
	87	Undefined
	88	Undefined
	89	Undefined
	90	Undefined
	91	Reverb Send Level
	92	Effects 2 Depth
	93	Chorus Send Level
	94	Effects 4 Depth
	95	Effects 5 Depth
	96	Data Entry +1
	97	Data Entry -1
	98	(NRPN) Non-Registered Parameter Number (LSB)
	99	(NRPN) Non-Registered Parameter Number (MSB)
	100	(RPN) Registered Parameter Number

	Number (LSB)
101	(RPN) Registered Parameter Number (MSB)
102	Undefined
103	Undefined
104	Undefined
105	Undefined
106	Undefined
107	Undefined
108	Undefined
109	Undefined
110	Undefined
111	Undefined
112	Undefined
113	Undefined
114	Undefined
115	Undefined
116	Undefined
117	Undefined
118	Undefined
119	Undefined
120	All Sound Off
121	Reset All Controllers
122	Local Control On/Off
123	All Notes Off
124	Omni Mode Off + All Notes
125	Omni Mode On + All Notes
126	Poly Mode On/Off + All Notes
127	Poly Mode Off + All Notes

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